Checklist of CITES Species

# Identification Manual
## Volume 4: Parts and Derivatives I

Originally compiled with the advice and guidance of the Identification Manual Committee



UN environment programme WCMC

The CITES Identification Manual is a collection of data sheets designed to help identify various species of fauna and flora with drawings, photographs, maps and concise descriptions. The manual's sheets were published over a 29 year period, from 1980–2009. All sheets are provided as originally published, and, as such, no warranty of any kind is given as to the completeness or accuracy of their content. Identification materials are not available for every species, and may be absent particularly for species listed in the CITES Appendices after 2009.

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The manual contains materials available in the three working languages of the Convention (English, French and Spanish), but materials in French and Spanish are available for fewer taxa. Materials are provided in the language specified where possible, but where materials are not available in French and Spanish, they are instead provided in English.

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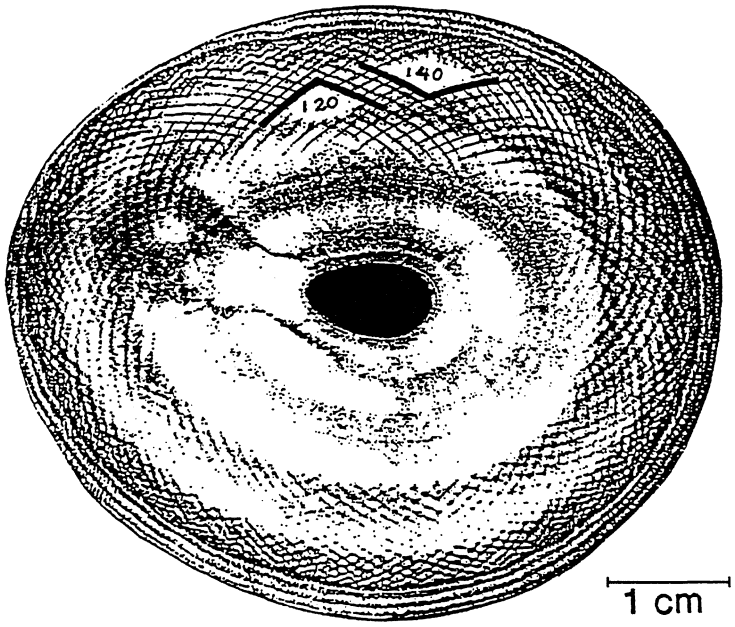
# IDENTIFICATION GUIDE FOR IVORY AND IVORY SUBSTITUTES

Edgard O. Espinoza
Mary-Jacque Mann

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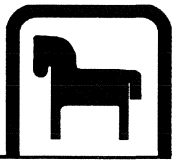
# Ivory identification: Introduction





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*COVER: An enhanced photocopy of the Schreger pattern in a cross-section of extant elephant ivory. A concave angle and a convex angle have been marked and the angle measurements are shown. For an explanation of the Schreger pattern and the method for measuring and interpreting Schreger angles, see pages 9 – 11.*

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## INTRODUCTION

The methods, data and background information on ivory identification compiled in this handbook are the result of forensic research conducted by the United States National Fish & Wildlife Forensics Laboratory, located in Ashland, Oregon.

The goal of the research was to develop a visual and non-destructive means of tentatively distinguishing clearly legal ivory from suspected illegal ivory at ports of entry. As such, it was necessary that the methods be 1) simple to perform, and 2) not to require the use of sophisticated scientific instruments. In this regard, we were successful.

In reviewing the text, you will notice that we did not include detailed classical morphology data on whole tusks or teeth; mostly because the whole structures are fairly easy to identify but also because it is impossible to anticipate which portion of a tusk or tooth will be used for any specific carving. Instead, we chose to focus our attention on the 'species determining' characteristics of the ivory material itself.

The result is a handbook designed to offer wildlife law enforcement officers, scientists and managers a tentative visual means of distinguishing legal from illegal ivory, and a "probable cause" justification for seizure of the suspected illegal material.

One point which must be emphasized: while the methods described in this handbook are reliable for the purposes described (i.e.: tentative visual identification, and "probable cause" to seize as evidence), *an examination of the carved ivory object by a trained scientist is still necessary to obtain a positive identification of the species source.*

We hope that this handbook proves to be useful to you in your endeavors to protect ivory-bearing species.

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The identification guide for ivory and ivory substitutes was published in a form of a booklet in 1991. It was published in the three working languages of the Convention by World Wildlife Fund and the Conservation Foundation.

Because the booklet was sold out, the Secretariat has decided to reprint the text and the illustrations as part of the CITES Identification Manual.

The Secretariat is grateful to World Wildlife Fund and the Conservation Foundation for permitting this reprint, and to the authors for verifying the original text, that needed no amendments.

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## WHAT IS IVORY?

The word "ivory was traditionally applied only to the tusks of elephants. However, the chemical structure of the teeth and tusks of mammals is the same regardless of the species of origin, and the trade in certain teeth and tusks other than elephant is well established and widespread. Therefore, "ivory" can correctly be used to describe any mammalian tooth or tusk of commercial interest which is large enough to be carved or scrimshawed.

Teeth and tusks have the same origins. Teeth are specialized structures adapted for food mastication. Tusks, which are extremely large teeth projecting beyond the lips, have evolved from teeth and give certain species an evolutionary advantage. The teeth of most mammals consist of a root, a neck and a crown. A tusk consists of a root and the tusk proper.

Teeth and tusks (Fig. 8) have the same physical structures: pulp cavity, dentine, cementum and enamel. The innermost area is the pulp cavity. The pulp cavity is an empty space within the tooth that conforms to the shape of the pulp.

Odontoblastic cells line the pulp cavity and are responsible for the production of dentine. Dentine, which is the main component of carved ivory objects, forms a layer of consistent thickness around the pulp cavity and comprises the bulk of the tooth and the tusk. Dentine is a mineralized connective tissue with an organic matrix of collagenous proteins. The inorganic component of dentine consists of dahllite with the general formula $Ca_{10}(PO_4)_6(CO_3)\ H_2O$. Dentine contains a microscopic structure called dentinal tubules which are micro-canals that radiate outward through the dentine from the pulp cavity to the exterior cementum border. These canals have different configurations in different ivories and their diameter ranges between 0.8 and 2.2 microns. Their length is dictated by the radius of the tusk. The three dimensional configuration of the dentinal tubules is under genetic control and is therefore a characteristic unique to the order.

Exterior to the dentine lies the cementum layer. Cementum forms a layer surrounding the dentine of tooth and tusk roots. Its main function is to adhere the tooth and tusk root to the mandibular and maxillary jaw bones. Incremental lines are commonly seen in cementum.

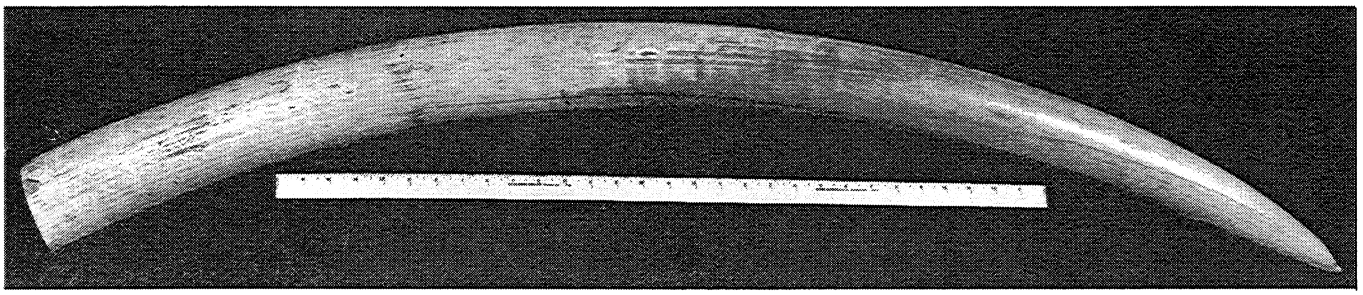
Enamel, the hardest animal tissue, covers the surface of the tooth or tusk which receives the most wear, such as the tip or crown. Ameloblasts are responsible for the formation of enamel exhibits a prismatic structure with prisms that run perpendicular to the crown or tip. Enamel prism patterns can have both taxonomic and evolutionary significance.

Tooth and tusk ivory can be carved into an almost infinite variety of shapes and objects. A few examples of carved ivory objects are small statuary, netsukes, jewelry, flatware handles, furniture inlays, and piano keys. Additionally, wart hog tusks, and teeth from sperm whales, killer whales and hippos can also be scrimshawed or superficially carved, thus retaining their original shapes as morphologically rocognizable objects.

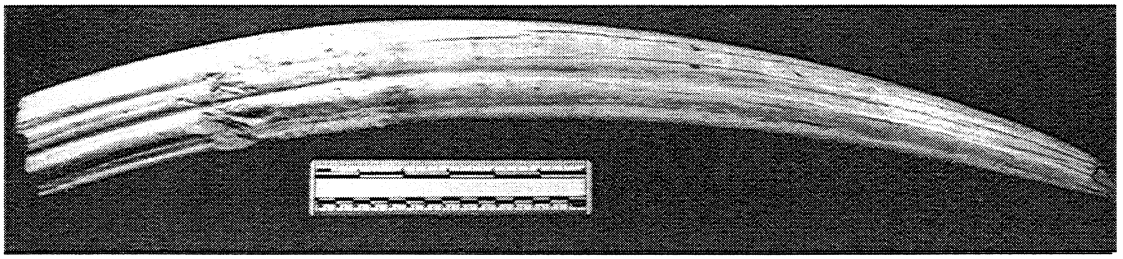
The identification of ivory and ivory substitutes is based on the physical and chemical class characteristics of these materials. This handbook presents an approach to identification using the macroscopic and microscopic Physical characteristics of ivory in combination with a simple chemical test using ultraviolet light. Table 1, to be used in conjunction with the text of this manual, is a suggested flow chart for the preliminary identification of ivory and ivory substitutes. Table 2 summarizes the class characteristics of selected commercial ivories. Table 3 and 4 summarize the class characteristics of selected ivory substitutes. Appendix 1 is a step-by-step guide for identification using this text. Appendix 2 is a list of supplies and equipment for use in the preliminary identification of ivory and ivory substitutes.

## PLATE 1

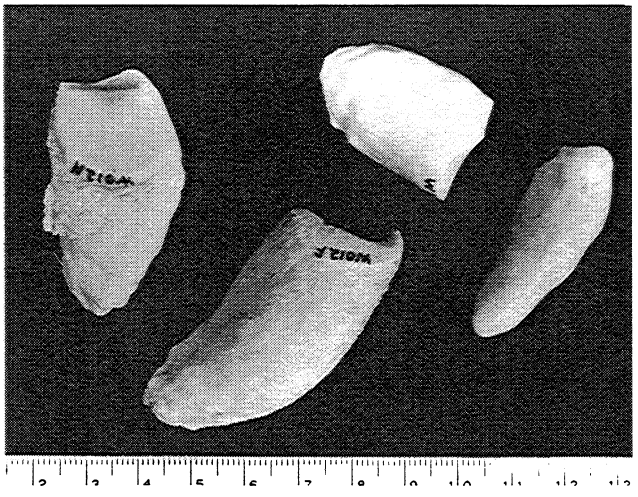
## NATURAL UNPROCESSED IVORY



1. African elephant tusk (upper incisor).



2. Walrus tusk (upper canine).



3. Walrus teeth.

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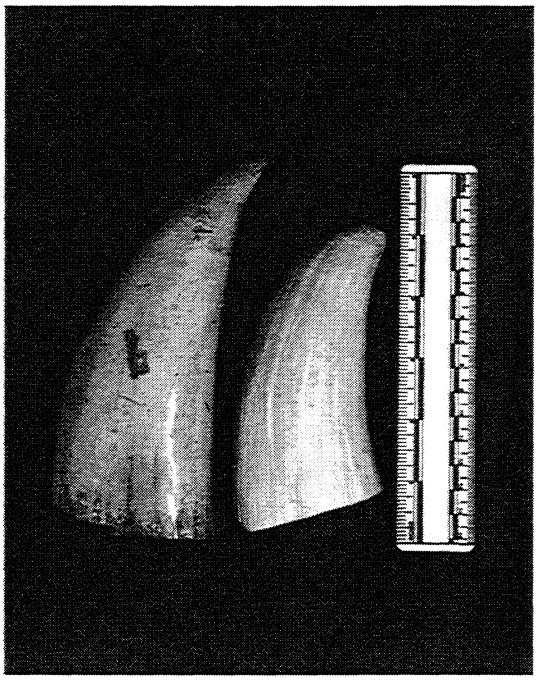
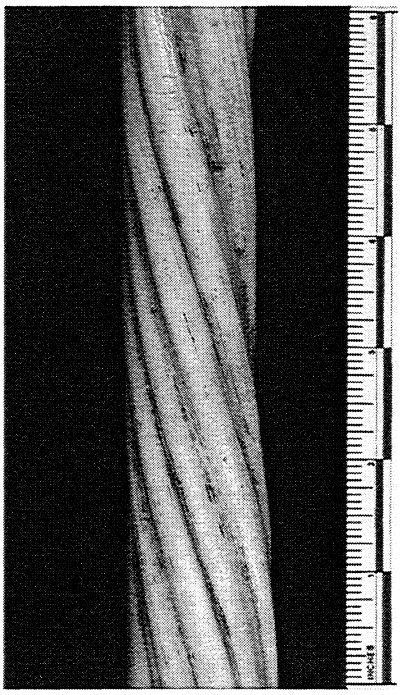
## PLATE 2

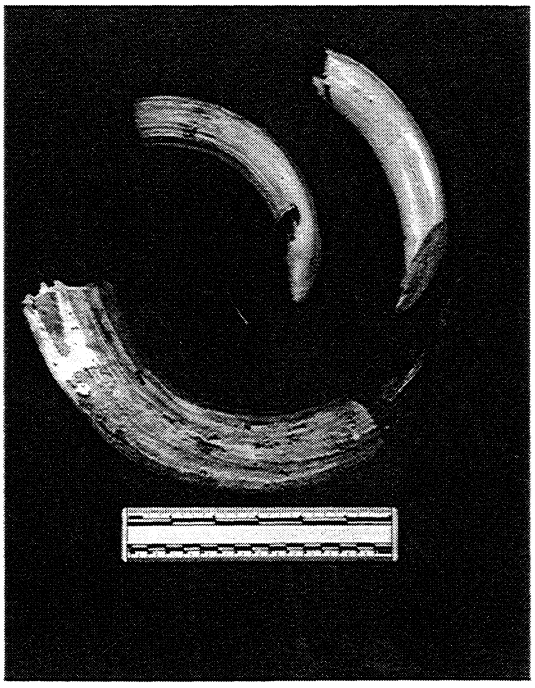
## NATURAL UNPROCESSED IVORY



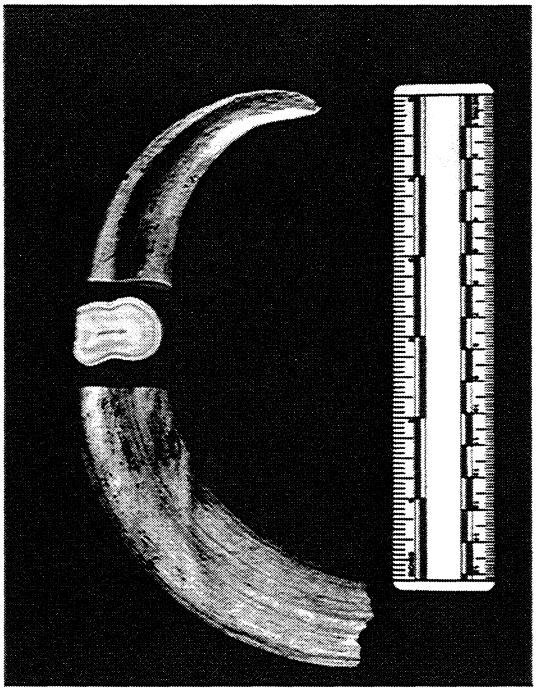
4. Whale teeth (Sperm/Killer whales).



5. Narwhal (upper incisor).
Note: this tusk has been partly worked.



6. Hippopotamus teeth (clockwise from top left: upper incisor, upper canine, lower canine).



7. Wart hog tusk (upper canine).

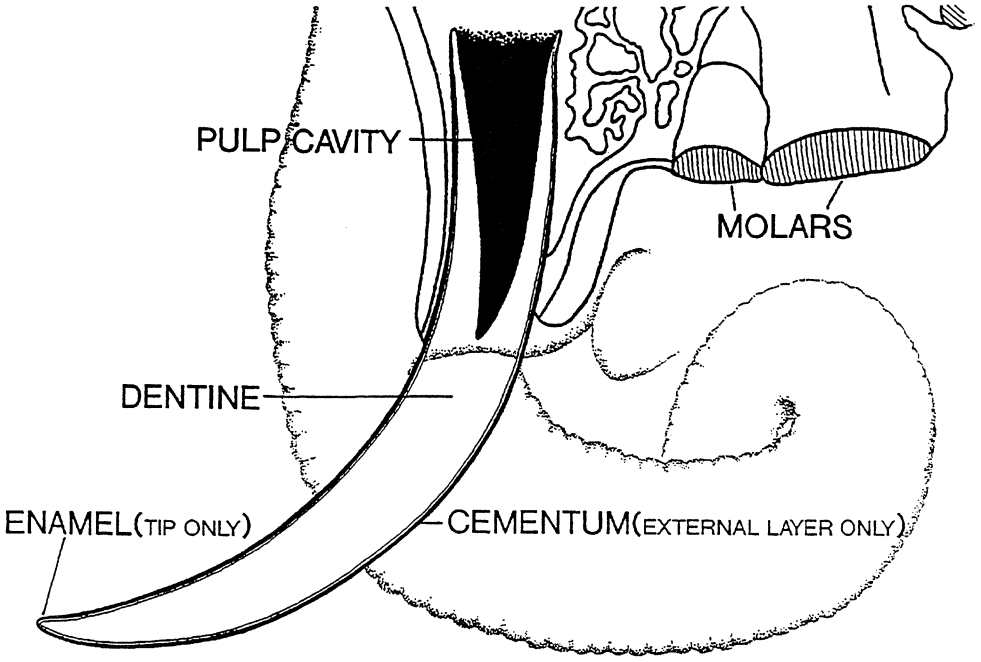



Figure 8. Diagram of tusk morphology.

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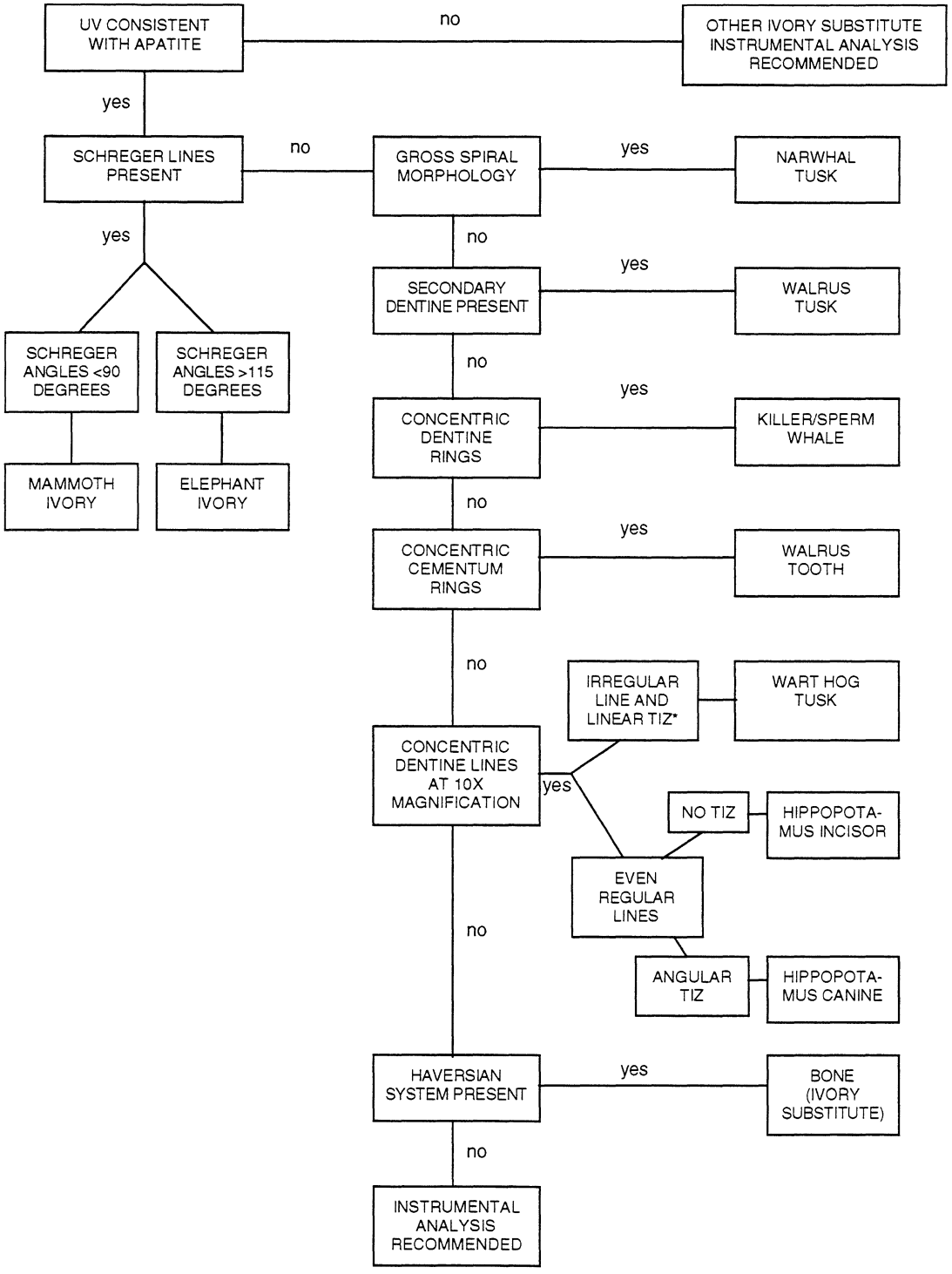
## TABLE 1. SCHEME FOR THE PRELIMINARY CHARACTERIZATION OF IVORY AND IVORY SUBSTITUTES IN CROSS-SECTION




* TIZ = Tusk Interstitial Zone

## TABLE 2. CLASS CHARACTERISTICS OF SELECTED COMMERCIAL IVORIES

| SOURCE | MODIFIED TOOTH | MACROSCOPIC CHARACTERISTIC | MICROSCOPIC CHARACTERISTIC (10X) | ENAMEL | UV CHARACTERISTIC |
|---|---|---|---|---|---|
| Elephant (Asian and African) | upper incisors | upper incisors | | tip, worn away | |
| Mammoth | upper incisors | upper incisors | | | vivianite may be present |
| Walrus tusk | upper canines | upper canines | | tip, worn away | |
| Walrus teeth | all teeth | all teeth | | tip, may be worn | |
| Killer/Sperm Whale | all teeth | all teeth | | tip | |
| Narwhal | upper incisor | upper incisor | | tip, worn away | |
| Hippopotamus | upper canines | upper canines | fine concentric lines in cross-section | longitudinal band | |
| Hippopotamus | lower canines | lower canines | fine concentric lines in cross-section | longitudinal band | |
| Hippopotamus | lower incisors | lower incisors | fine concentric lines in cross-section | tip | |
| Wart Hog | upper and lower canines | upper and lower canines | fine concentric lines in cross-section | longitudinal band | |

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**ELEPHANT AND MAMMOTH** (*Laxodonta africana, Elephas maximus, Mammuthus primigenus*)

Elephant and mammoth tusk ivory comes from the two modified upper incisors of extant and extinct members of the same order (Proboscidea). African and Asian elephants are both extant. Mammoths have been extinct for 10,000 years. Because of the geographical range in Alaska and Siberia, *Mammuthus primigenus* tusks have been well preserved. Therefore, *Mammuthus primigenus* is the only extinct proboscidean which consistently provides high quality, carvable ivory.

An African elephant tusk can grow to 3.5 meters in length. Enamel is only present on the tusk tip in young animals. It is soon worn off and not replaced. Whole cross-section of proboscidean tusks are rounded or oval. Dentine composes 95% of the tusk and will sometimes display broad concentric bands. Cementum, which can be thick in extinct genera, covers the outside of the tusk. Cementum can present a layered appearance, particularly in mammoth.

Polished cross-section of elephant and mammoth ivory dentine display uniquely characteristic Schreger lines[1] Schreger lines are commonly referred to as cross-hatchings, engine turnings, or stacked chevrons. Schreger lines can be divided into two categories. The easily seen lines which are closest to the cementum are the outer Schreger lines. The faintly discernable lines found around the tusk nerve pulp cavities are the inner Schreger lines. The intersections of Schreger lines form angles. These Schreger angles appear in two forms: concave angles and convex angles. Concave angles have slightly concave sides and open to the medial (inner) area of the tusk. Convex angles have somewhat convex sides and open to the lateral (outer) area of the tusk. Outer Schreger angles, both concave and convex, are acute in extinct proboscidea and obtuse in extant proboscidea (Fig. 9).

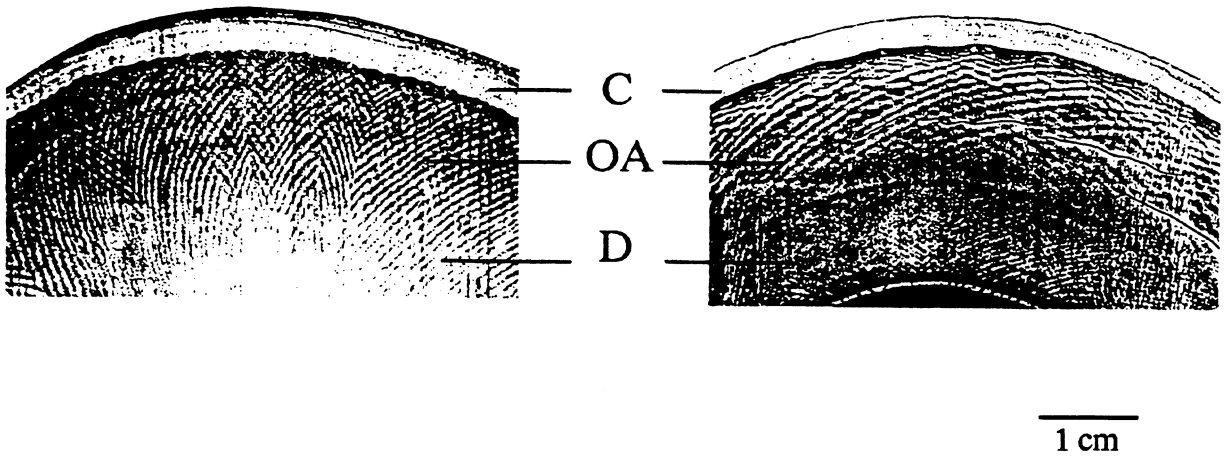


Figure 9. Photocopies of extinct (left) and extant (right) proboscidean ivory cross-sections. The outer Schreger angles (OA) are those which are in the dentine (D) closest to the cementum (C).

[1] *Schreger lines in proboscidean dentine were described by the German anatomist Bernhard Gottlob Schreger in 1800 (Obermayer 1881) and should not be confused with Hunter-Schreger bands in enamel.*

A photocopy machine is used to capture Schreger angles from mammoth and elephant ivory cross-sections. The cross-section is placed on the glass plate of a photocopy machine. A blue photocopy transparency sheet may be placed between the object and the glass plate to enhance the detail of the photocopy. Enlargement of the photocopy may also improve the image and facilitate the measurement process.

After a photocopy of the ivory cross-section has been obtained, Schreger angles may be marked and measured. Use a pen or pencil and a ruler to mark and extend selected outer Schreger angle lines. **NOTE: *Only outer Schreger angles should be used in this test*.** Once the angles have been marked and extended, a protractor is used to obtain an angle measurement. Several angles, including both concave and convex angles, should be marked and measured. Once the angles have been marked and measured, calculate the angle average. The angle average can then be compared to the data base in Figures 10 and 11.

Figures 10 and 11 show the angle data obtained in the study of the outer Schreger pattern of 26 cross-sections of elephant ivory (*Laxodonta africana* and *Elephas maximus*) and 26 cross-sections of mammoth ivory (*Mammuthus primigenus*). Five concave and five convex angles were measured on each of these 52 samples. The distribution of all 520 of these angles is presented in Figure 10. This figure shows that between 90 degrees and 115 degrees an overlap exists in the lower end of the elephant concave angle range and the upper end of the mammoth concave/convex angle range. ***Because specimens from both extinct and extant sources may present angles between 90 degrees and 115 degrees in the outer Schreger pattern area, the differentiation of mammoth from elephant ivory should never be based upon single angle measurements when the angles fall in this range.***

The distribution of the averages (means) of the concave and convex outer angles from the 52 samples of elephant and extinct proboscidean ivory is presented in Figure 11. When the averages are used to represent the angles in the individual samples, a clear separation between extinct and extant proboscideans is observed. All the elephant samples had averages above 100 degrees, and all the extinct proboscideans had angle averages below 100 degrees.

Another feature may be used to identify mammoth ivory. Mammoth ivory will occasionally display intrusive brownish or blue-green colored blemishes caused by an iron phosphate called vivianite. Elephant ivory will not display intrusive vivianite discoloration in its natural state. It is of interest to note that when the discoloration is barely perceptible to the eye, the use of a hand-held ultraviolet light source causes the blemished area to stand out with a dramatic purple velvet-like appearance. Even if discolored, elephant ivory will not have the characteristic fluorescence of vivianite.

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Figure 10. Histogram of all outer Schreger angles of extinct and extant proboscidean ivory samples (N = 260 each).

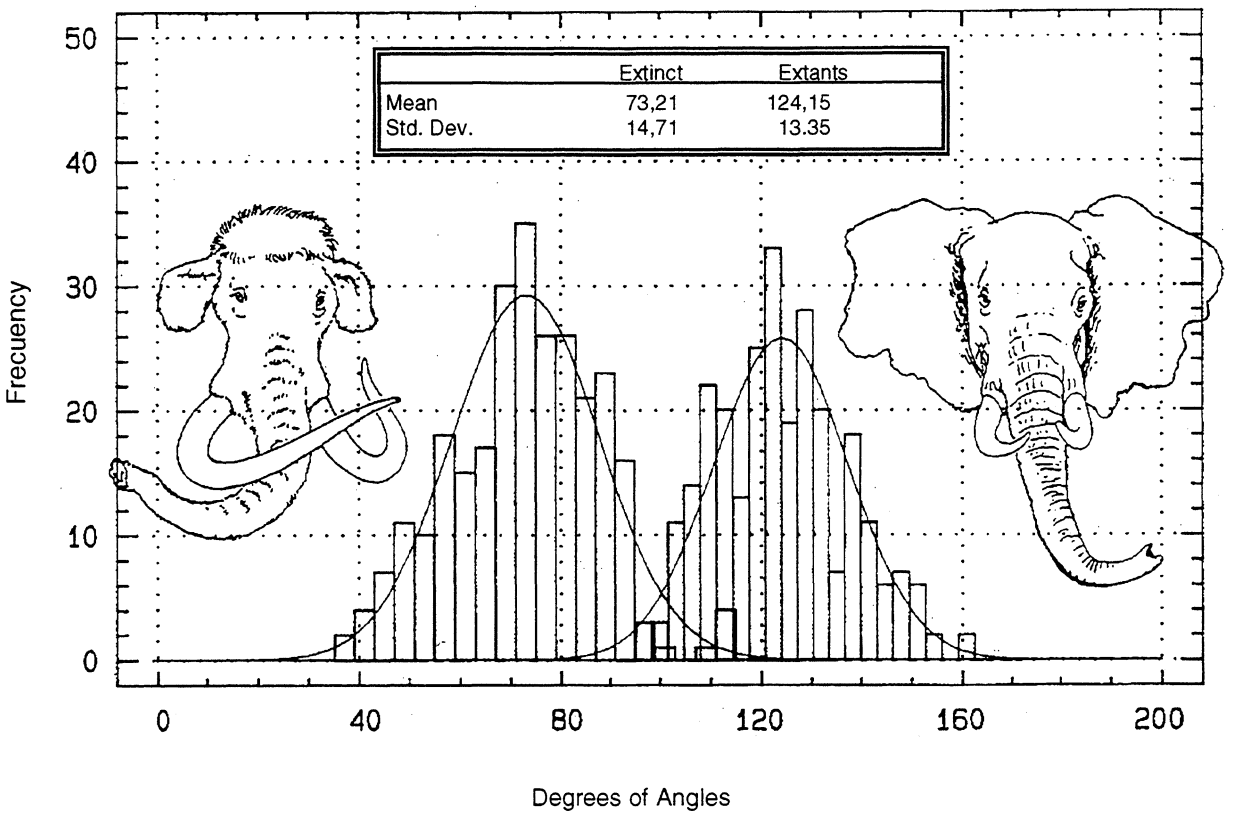
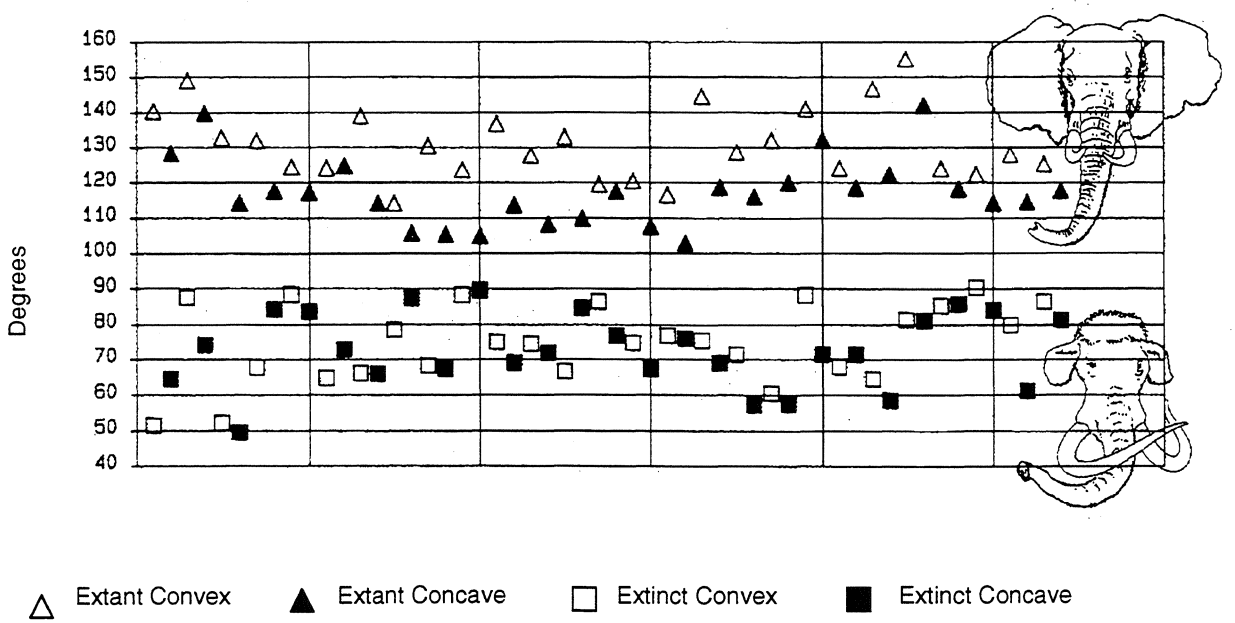



Figure 11. Plot of mean concave and mean convex outer Schreger angles of extinct and extant proboscidean ivory samples (N = 26 each).



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**WALRUS** (*Odobenus rosmarus*)

Walrus tusk ivory comes from two modified upper canines. The tusks of a Pacific walrus may attain a length of one meter. Walrus teeth are also commercially carved and traded. The average walrus tooth has a rounded, irregular peg shape and is approximately 5 cm in length.

The tip of a walrus tusk has an enamel coating which is worn away during the animal's youth. Fine longitudinal cracks, which appear as radial cracks in cross-section, originate in the cementum and penetrate the dentine. These cracks can be seen throughout the length of the tusk. Whole cross-sections of walrus tusks are generally oval with widely spaced indentations. The dentine is composed of two types: primary dentine and secondary dentine (often called osteodentine) (Fig. 13). Primary dentine has a classical ivory appearance. Secondary dentine looks marbled or oatmeal-like. This type of secondary dentine is diagnostic for walrus tusk ivory.

The dentine in walrus teeth is mainly primary dentine. The center of the tooth may contain a small core of apparent secondary dentine. The dentine is completely surrounded by a cementum layer. Enamel may or may not be present according to the extent to which the tooth has been carved or worn. A cross-section of a walrus tooth will show very thick cementum with prominent cementum rings (Fig. 12). Concentric rings in walrus teeth are due to hypercementosis. The dentine is separated from the cementum by a clearly defined narrow transition ring.

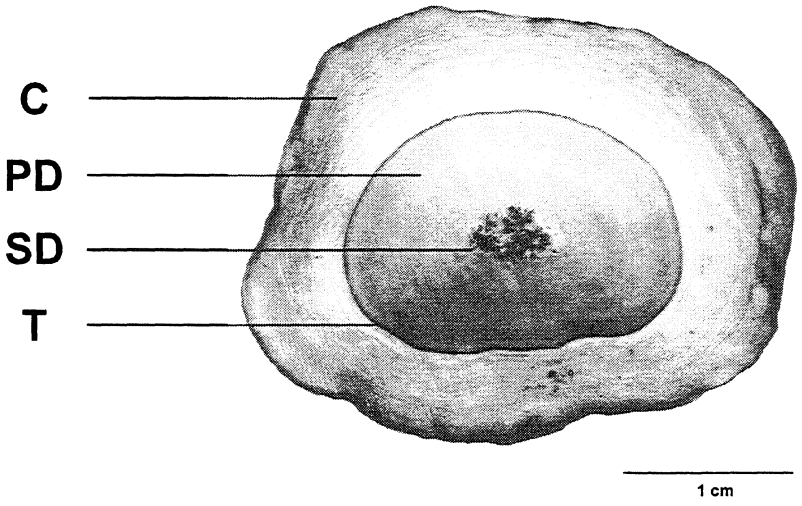


Figure 12. Enlarged and enhanced photograph of a cross-section of a walrus tooth showing cemetum (C), transition ring (T), and primary dentine (PD). This tooth also shows a small area of apparent secondary dentine (SD). Note the presence of concentric rings in the exceptionally thick cementum.

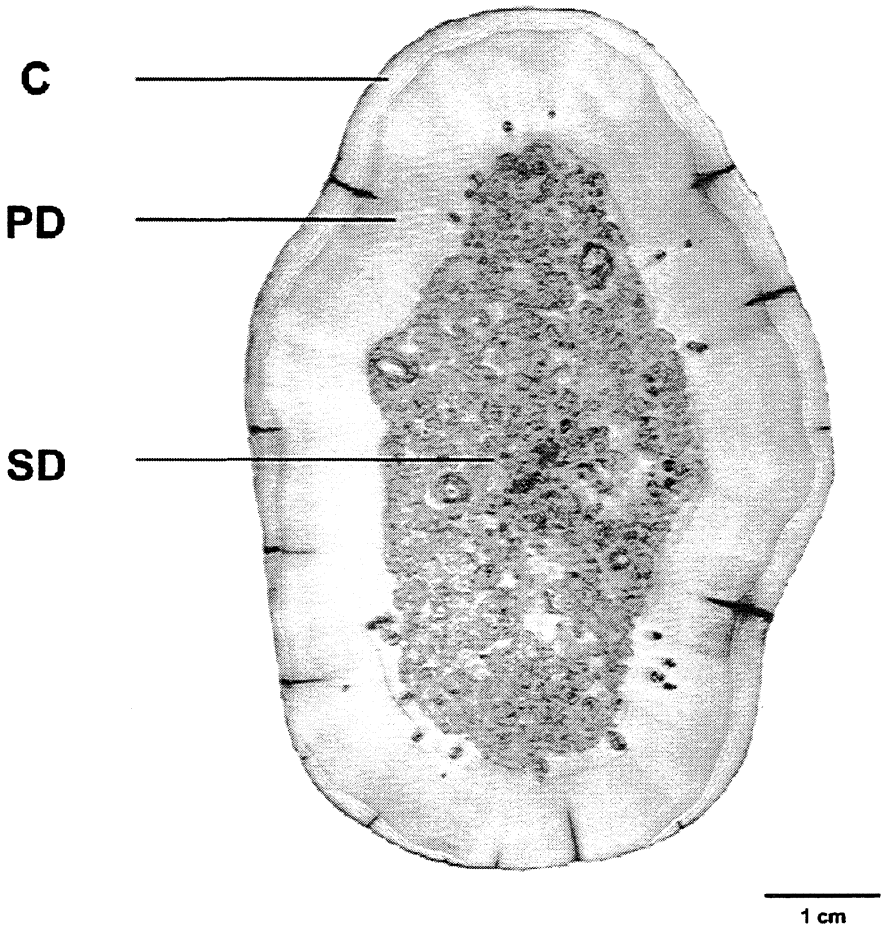


Figure 13. Enlarged and enhanced photograph of a cross-section of walrus tusk showing cementum (C), primary dentine (PD), and secondary dentine (SD).

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**SPERM WHALE AND KILLER WHALE** (*Physter catodon* and *Orcinus orca*)

Sperm whale teeth can be quite large. The average height is approximately twenty centimeters. Killer whale teeth are smaller. Both species display conically shaped teeth with a small amount of enamel at the tips. The rest of the tooth is covered by cementum. Whole cross-section of killer whale and sperm whale teeth are rounded or oval (Fig. 14). In addition, killer whale teeth show two slight peripheral indentations. The dentine is deposited in a progressive laminar fashion. As a result of this laminar deposition, killer and sperm whale teeth will show prominent concentric dentine rings in cross-section. Killer whale teeth may also display a faint rosette pattern in the dentine cross-section. The dentine is separated from the cementum by a clearly defined transition ring.

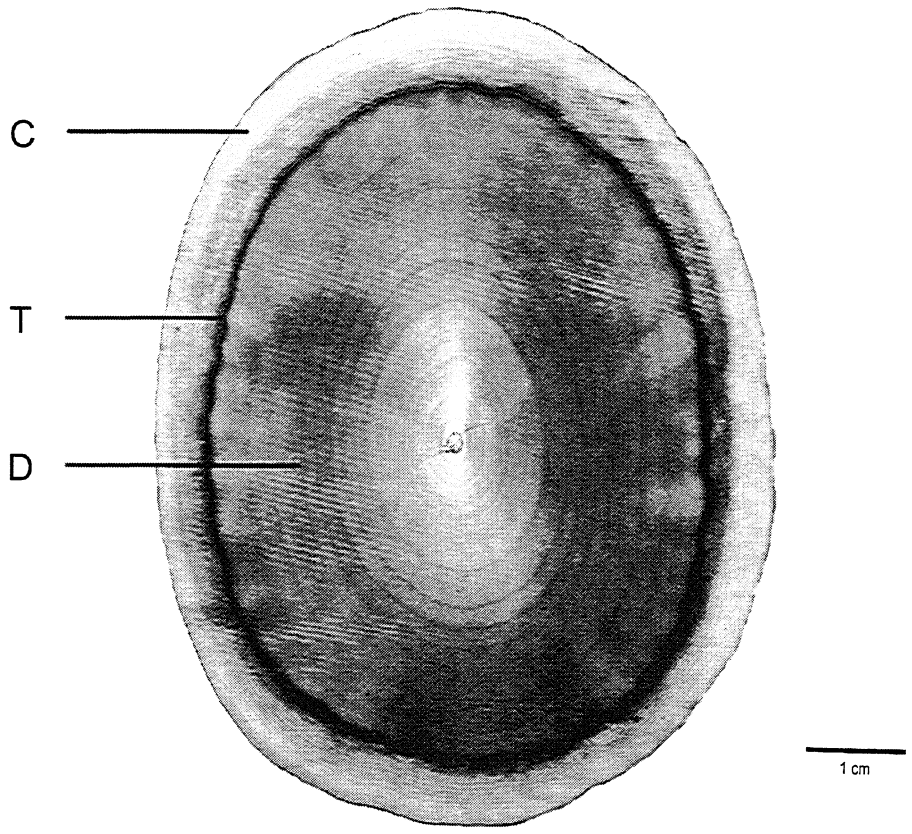


Figure 14. Enlarged and enhanced photograph of a cross-section of a sperm whale tooth showing cementum (C), transition ring (T), and dentine (D). Note the presence of concentric rings in the dentine.

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**NARWHAL** (*Monodon monoceros*)

The narwhal is a rarely seen arctic whale. The male of this species has a single left tusk that is a modified upper incisor. The tusk is spirally twisted, usually in a counter-clockwise direction. In a mature specimen the tusk can be from two to seven meters long. Enamel may be present at the tip of the tusk. The cementum frequently displays longitudinal cracks which follow the depressed areas of the spiral pattern. As a result, narwhal tusk cross-sections are rounded with peripheral indentations. The cementum is separated from the dentine by a clearly defined transition ring. Like killer and sperm whale, the dentine can display prominent concentric rings. The pulp cavity extends throughout most of the length of the tusk giving cross-sections a hollow interior (Fig. 15).

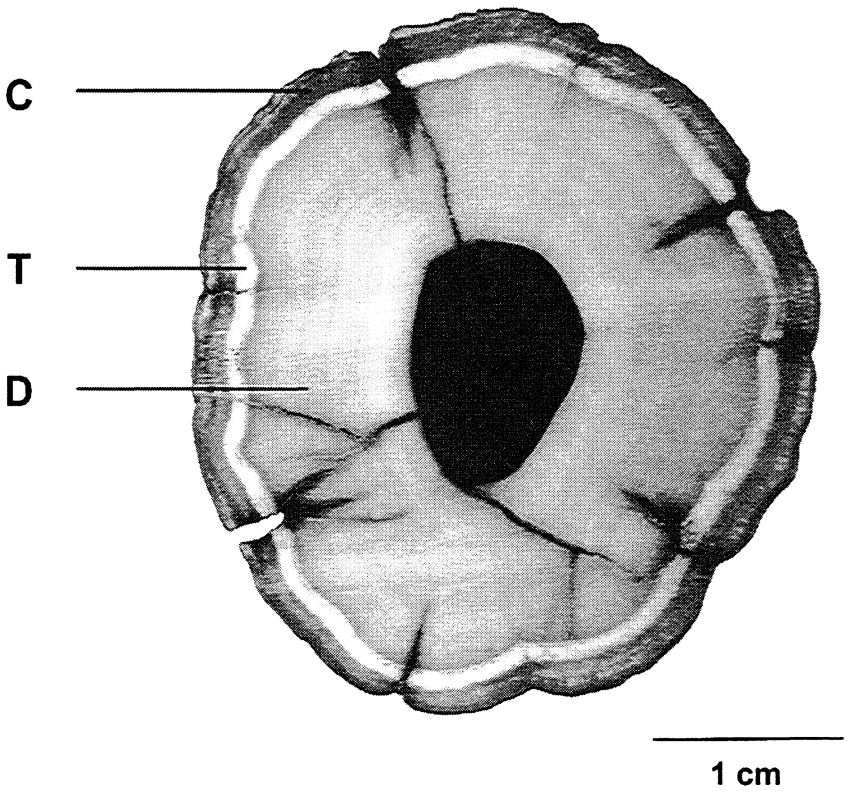


Figure 15. Enlarged and enhanced photograph of a cross-section of narwhal tusk showing the cementum (C), transition ring (T), and dentine (D).

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**HIPPOPOTAMUS** (*Hippopotamus amphibius*)

Upper and lower canines and incisors are the most common sources for hippo ivory. Each type of tooth has distinctive gross morphology. Close examination of cross-section of hippo dentine with the aid of a 10X hand lens reveals a tightly packed series of fine concentric lines. These lines can be regularly or irregularly spaced. The orientation of the lines will follow the overall shape of the particular tooth. The center of the tooth may display an interstitial zone (TIZ). This interstitial zone represents the growth convergence of the developing dentin.

The hippo's curved upper canines are oval to rounded in cross-section. In the unprocessed state, a deep longitudinal indentation extends for the length of the tooth on the inner surface of the curve. A broad longitudinal band of enamel covers approximately two-thirds of the surface area of the tooth. This enamel band is frequently removed during the carving process. The surface which is not coated with enamel displays a very thin layer of cementum. This may also be removed during processing. The interstitial zone in the upper canine is a curved line of broadly arched line (Fig. 16).

The lower canines are the hippo's largest teeth. They are strongly curved. In cross-section, the lower canines are triangular. Raw lower canines will display a faint longitudinal indentation, a marked rippling of the surface and an approximate two-thirds coverage with enamel. Like upper canine, a thin layer of cementum exists in the areas not covered with enamel. And, as with the upper canines, these surface characteristics are frequently removed during processing. The interstitial zone in the lower canine is broadly arched line (Fig. 17).

Hippo incisors can be described as peg shaped. Enamel is found on the tooth crown. The center of the tooth in cross-section shows a small dot (Fig. 18).

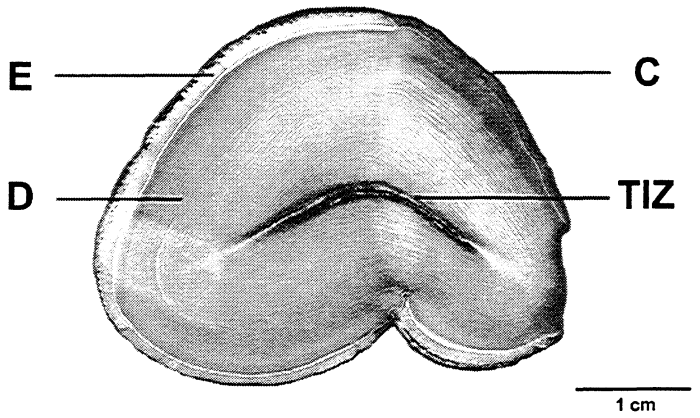


Figure 16. Enlarged and enhanced photograph of a cross-section of hippo upper canine showing cementum (C), enamel (E), and dentine (D). Note the angular tusk interstitial zone (TIZ) and the fine lines in the dentine.

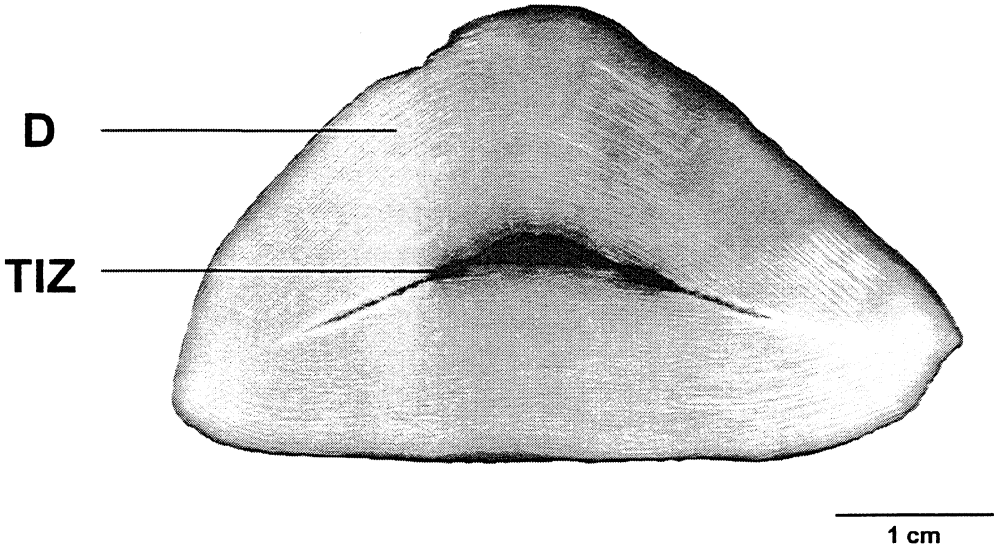


Figure 17. Enlarged and enhanced photograph of a cross-section of hippo lower canine showing dentine (D) only. The cementum has been mechanically removed from this specimen. Note the arched tusk interstitial zone (TIZ) and the fine lines in the dentine.

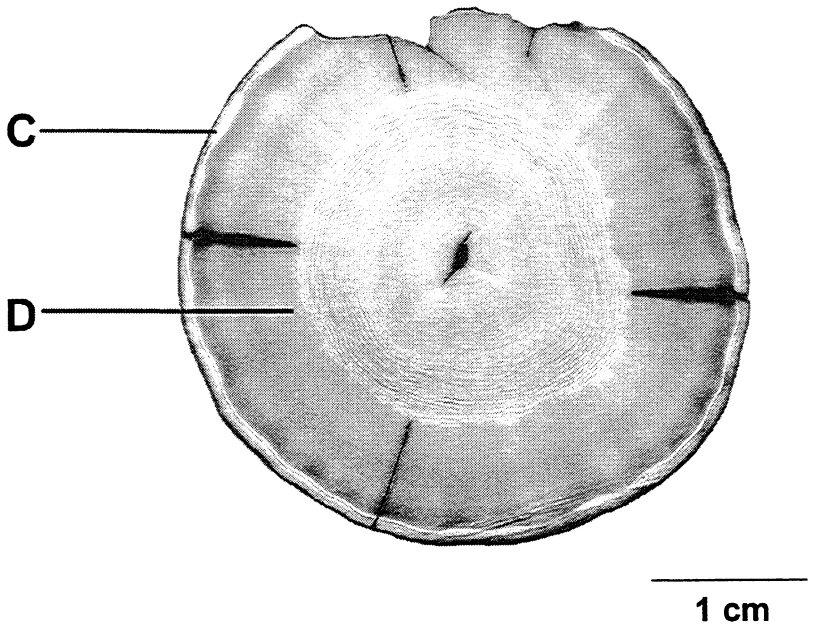


Figure 18. Enlarged and enhanced photograph of a cross-section of hippo incisor showing cementum (C) and dentine (D). Note the fine lines in the dentine.

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**WART HOG** (*Phacochoerus aethiopicus*)

Wart hog ivory comes from the animal's upper and lower canine teeth. These tusks are strongly curved and have generally squared cross-sections. Full length to near full length furrows and a longitudinal enamel band with approximately one–half to two-thirds coverage mark the tusks' surface in the raw, unprocessed state. The interstitial zone is a narrow line. Wart hog ivory tends to have a mottled appearance. Examination of a cross-section with a 10X hand lens reveals that wart hog dentine shows irregularly spaced concentric lines of varying thickness (Fig. 19).

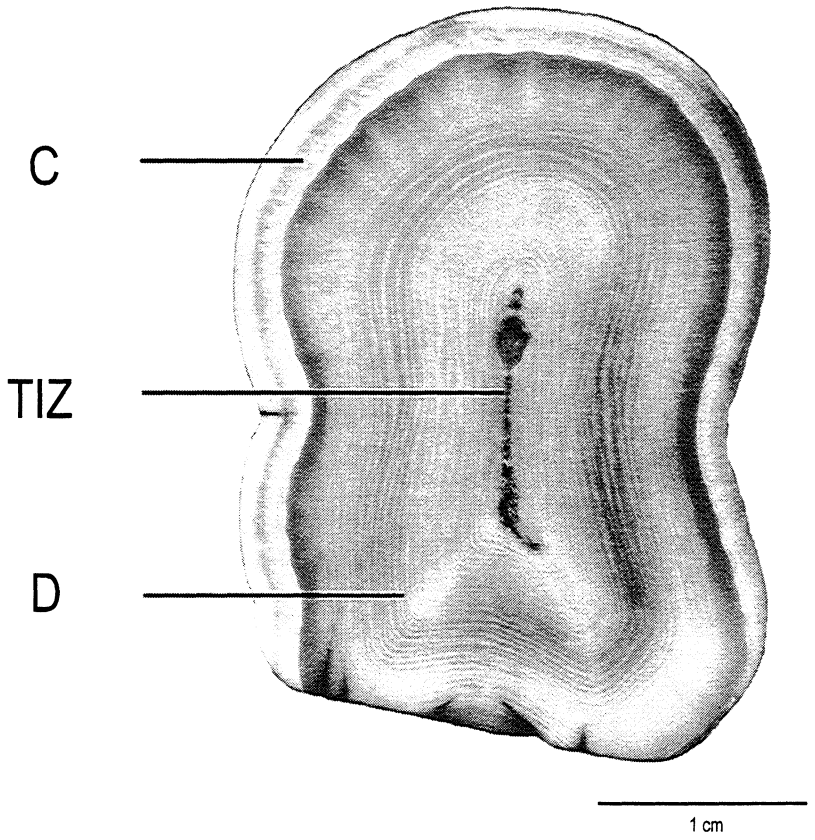


Figure 19. Enlarged and enhanced photograph of a cross-section of a wart hog tusk showing cementum (C) and dentine (D). Note the tusk interstitial zone (TIZ) line and fine lines in the dentine.

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## IVORY SUBSTITUTES

There are two categories of ivory substitutes: natural and manufactured. Among the natural ivory substitutes are bone, shell, hornbill ivory, and vegetable ivory. Plastic is a type of manufactured ivory substitute. Ivory substitutes are readily distinguishable from ivory by virtue of their ultraviolet light reactivity in combination with their physical characteristics. Sophisticated laboratory based examinations using non-destructive Fourier Transform Infrared Spectroscopy (FT-IR) will extend the identification process by analyzing the chemical constituents of the ivory substitute. Table 3 summarizes the class characteristics of ivory substitutes.

### TABLE 3. CLASS CHARACTERISTICS OF SELECTED IVORY SUBSTITUTES

| SOURCE | MATERIAL TYPE | MACROSCOPIC CHARACTERISTIC | MICROSCOPIC CHARACTERISTIC | UV CHARACTERISTIC |
|---|---|---|---|---|
| Bone | dahllite | haversian system | | fluorescence like ivory |
| Shell | calcium carbonate | color mottling may be present | | mottled dull blue fluorescence |
| Helmeted Hornbill | keratin | red coloration on periphery | | red color appears blue; ivory color remains true |
| Vegetable ivory | cellulose | dark brown husk may be present | fine concentric lines | fluorescence similar to ivory |
| Manufactured ivory substitutes | casein plus resin | | | absorbs UV light; dull blue appearance; celluloid may appear "mocha" |
| Manufactured ivory substitutes | ivory dust plus resin | | | absorbs UV light; dull blue appearance; |
| Manufactured ivory substitutes | polyester or phenolic resins | | | absorbs UV light; dull blue appearance; |

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## NATURAL IVORY SUBSTITUTES

### Bone

Bone is a mineralized connective tissue consisting of dahllite, proteins and lipids. Compact bone, which is most often used as an ivory substitute, is extensively permeated by a series of canals through which fluid flows. This is the Haversian System. The Haversian canals can be seen on a polished bone surface using a 10X hand lens. These canals appear as pits or scratch-like irregularities (Fig. 20). Their appearance is often accentuated by the presence of discolored organic material which adheres to the pit walls.

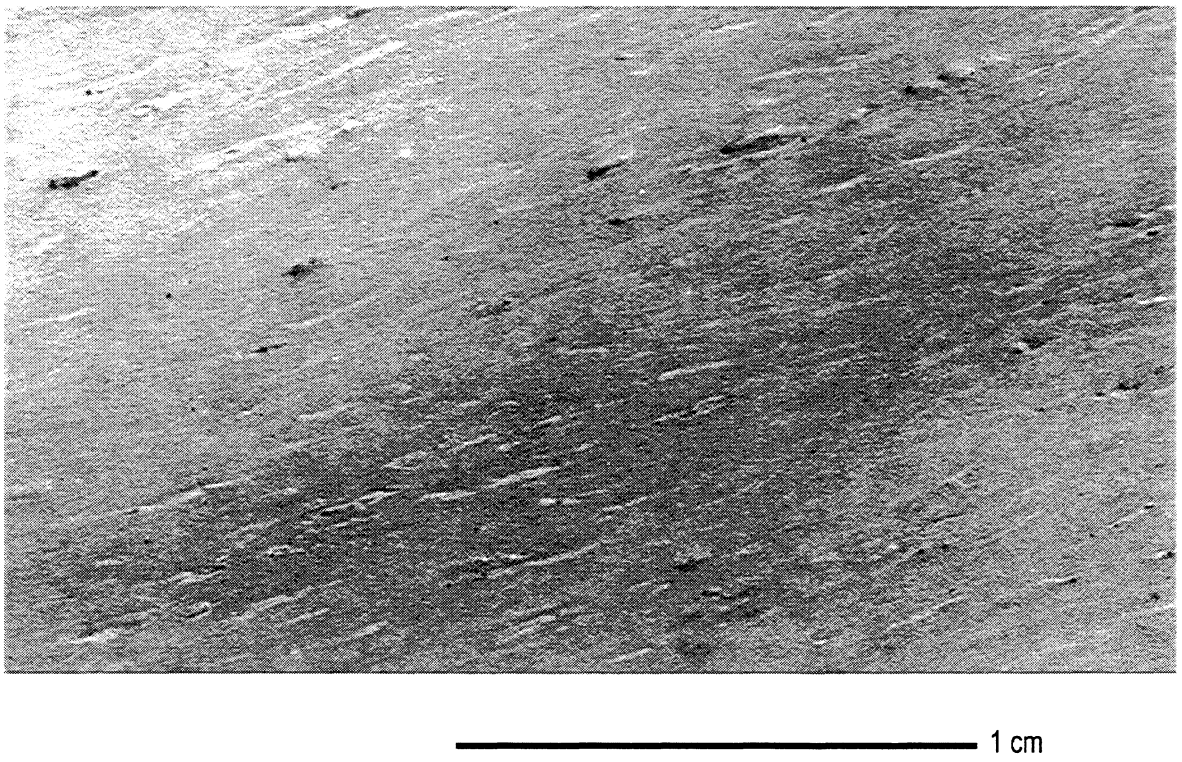


Figure 20. Photomicrograph of bone. Note the Haversian pits and irregularities on the surface.

### Shell

Shell is a calcium carbonate found as the protective covering of a soft bodied mollusk. Shell can be polished to a very smooth hard surface. Shells may present color mottling which persists through ultraviolet examination. In the absence of gross morphological features, identification of shell is best done by FT-IR.

**Helmeted Hornbill** *(Rhinoplax vigil)*

The casque of the endangered Helmeted Hornbill (Fig. 21), a native of Borneo, can be carved and polished. The casque is a hollow, roughly cylindrical attachment to the bird's upper bill. The casque is distinctive by virtue of its size, up to approximately 8 x 5 x 2.5 cm, and its peripheral color, which is a bright red. Other names for Hornbill casque "ivory" are "ho-ting" and "golden jade".

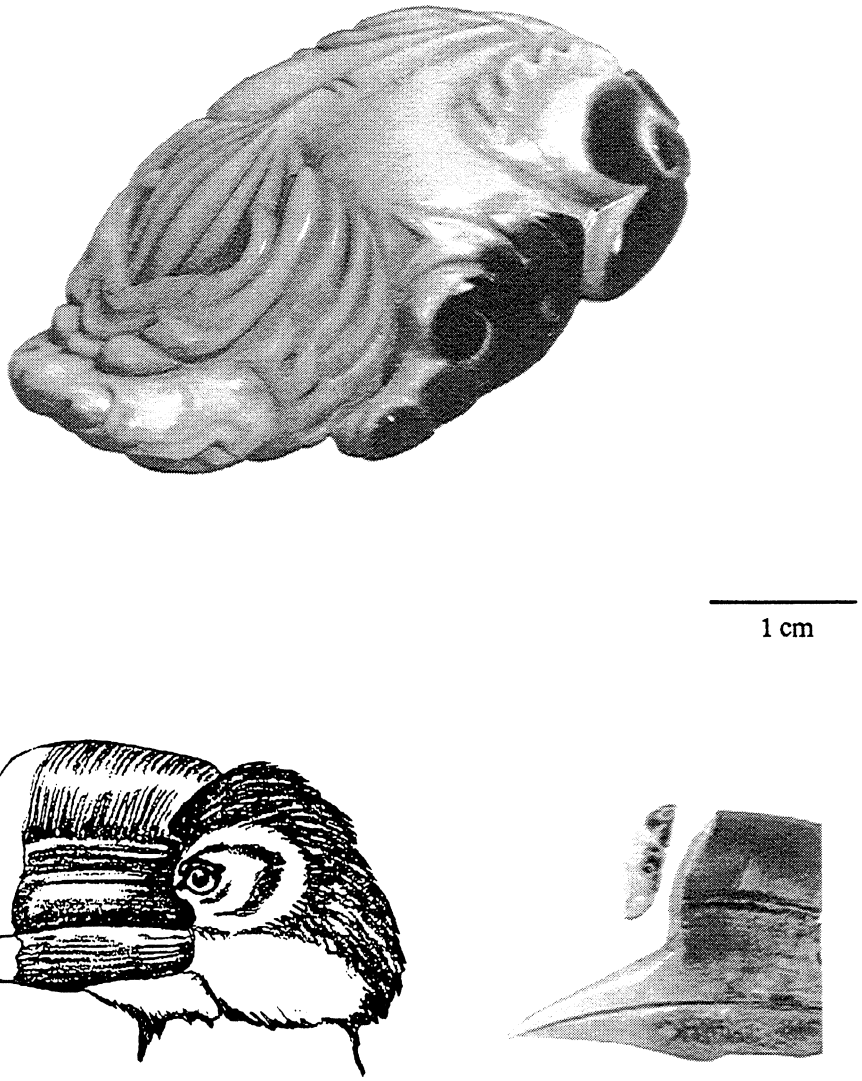


Figure 21. Photograph of a carved helmeted hornbill casque. Inserts are (left) a drawing of an intact hornbill head and (right) a photograph of a carved casque relative to its normal anatomical position. Note the peripheral coloration.

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**Vegetable Ivory** *(Phytelephas macrocarpa)*

Vegetable ivory or ivory nuts are primarily the nuts of the Tagua palm tree *(Phytelephas macrocarpa)* although other palms of the same subfamily also produce ivory nuts. Tagua trees grow mainly in moist locations in northern South America. The mature nut, which can reach the size of an apple, has a very white, exceedingly hard cellulose kernel, which is worked like ivory. The husk of the nut (Fig. 22) has a dark brown appearance and is frequently incorporated into the carving.

Examination of the cellulose in carved vegetable ivory reveals a series of fine, regularly spaced concentric lines (Fig. 23) similar to those seen in the hippopotamus. Close examination with a low powered microscope reveals a grainy or lined appearance. These features may not always be obvious on highly curved surfaces. Vegetable ivory UV fluorescence is very similar to ivory fluorescence. In the absence of obvious morphologically identifying features, identification of vegetable ivory is best done using FT-IR. Perhaps one of the oldest field tests for differentiating vegetable ivory from real ivory is the addition of sulfuric acid to the item to be examined. Sulfuric acid applied to vegetable ivory causes an irreversible pink coloring in about 12 minutes. Genuine ivory should not stain. *CAUTION: Due to the irreversible nature of this test, only a minute dot of acid should be applied to the object in question.*

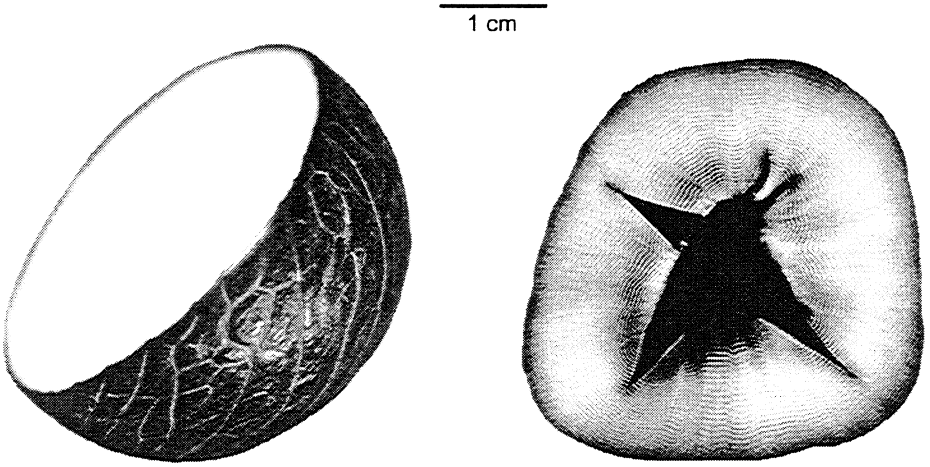


Figure 22. (left) Enlarged photograph of partially worked tagua nut showing cellulose kernel and husk.

Figure 23. (right) Enlarged and enhanced photograph of a cross section of tagua nut. Note the presence of fine lines.

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## MANUFACTURED IVORY SUBSTITUTES

Manufactured ivory substitutes fall into three categories: 1) composites of an organic resin and an inorganic material; 2) composites of casein[1] and a resin material and, 3) composites of ivory sawdust[2] with a binder or resin. Trade names for some manufactured ivory substitutes are listed below.

### TABLE 4. EXAMPLES OF MANUFACTURED IVORY SUBSTITUTES

| TRADE NAME | COMPOSITION | MANUFACTURER AND/OR DISTRIBUTOR |
|---|---|---|
| Vigopas P71A | polyester resin | Raschig Corp., Richmond, Virginia, USA |
| Dekorit 203<br>Dekorit V384 | phenolic resin | Raschig Corp., Richmond, Virginia, USA |
| Galolith | casein + polyester | Fedra Design Ltd., Providence, Rhode Island, USA |
| Celluloid | cellulose nitrate + camphormay contain casein | no longer manufactured |
| Composite polymer | ivory dust + styrene resin | |
| Ivorite | casein + hardener | Yamaha Corporation, Japan |
| Alabrite | calcium carbonate + adhesive binder | no longer manufactured |

Figures 24 and 25 are examples of manufactured ivory substitutes. Figure 24 is an early twentieth century celluloid, and Figure 25 is a modern polyester resin. Note the attempt to mimic a proboscidean pattern.

Regardless of the appearance or chemical composition of the manufactured ivory substitutes, they all share a common identifying characteristics. When ultraviolet light is shined on manufactured ivory products they absorb the ultraviolet light exhibiting a dull blue appearance. Ivory, on the other hand, has a white/blue florescent appearance.

Identification of manufactured ivory substitutes is facilitated if standards of the manufactured ivories are available for comparative purposes when using the ultraviolet light.

1 *Pure casein displays a UV fluorescence similar to ivory. The chemical structures, however, are easily distinguishable by FT-IR.*

2 *Ivory sawdust compositions are not ivory substitutes in the true sense of the term. They are subject to the same international trade controls and permit requirements as solid ivory products.*

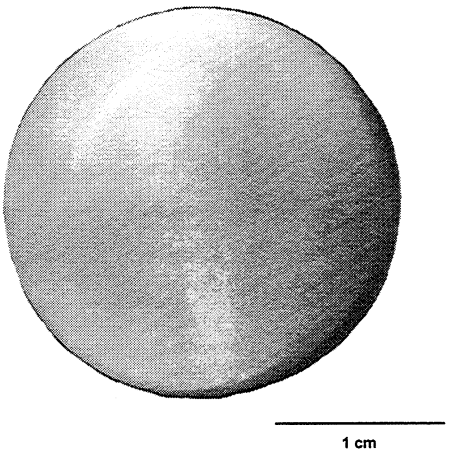


Figure 24. Enlarged and enhanced photograph of an early twentieth century celluloid ivory substitute. Note the design which attempts to mimic the pattern of proboscidean ivory.

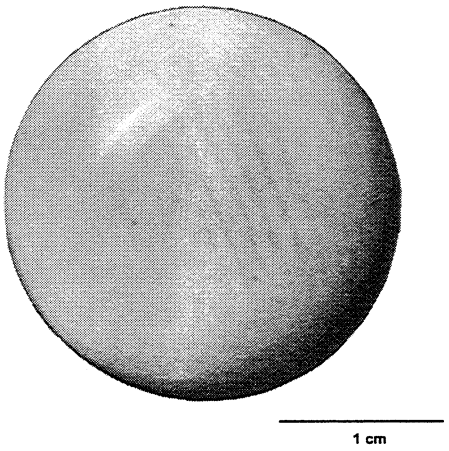


Figure 25. Enlarged and enhanced photograph of a modern polyester resin ivory substitute. Note the design which attempts to mimic the pattern of proboscidean ivory.

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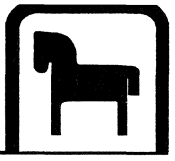

## ANNEX 1

### Procedure for the Preliminary Identification of Ivory and Ivory Substitutes

The following is a suggested procedure for use in the preliminary identification of ivory and ivory substitutes. This procedure should be used in conjunction with the text descriptions and Tables 1, 2, and 3.

1. Examine object with long wave ultraviolet light*

2. Examine object for the presence of significant diagnostic morphological features (see Tables 1, 2, and 3).

3. If Schreger angles are present, see pages 9 – 11.

4. If no specific identification is suggested by steps 1 through 3, submit object for laboratory controlled instrumental analyses.

* *Long wave ultraviolet radiation is hazardous to the eyes. NEVER look directly at UV light.*

## ANNEX 2

### List of Supplies and Equipment for use in the Preliminary Identification of Ivory and Ivory Substitutes

Long wave ultraviolet light*

(Optional) Set of comparison standards consisting of exemplar pieces of ivory, bone, shell, vegetable ivory, and manufactured ivory substitutes

10X magnification hand lens

Photocopy machine with variable contrast

Ruler

Protractor

* *Long wave ultraviolet radiation is hazardous to the eyes. NEVER look directly at a UV light.*

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## GLOSSARY

**Ameloblast:** enamel forming cell

**Artiodactyla:** the mammalian order which includes hippos and wart hogs

**Casque:** an enlargement on the upper surface of the bill of a hornbill bird

**Cementum:** a mineralized dental tissue which covers the dentine and causes the tooth or tusk to adhere to the jaw

**Cetacea:** the mammalian order which includes dolphins and great whales

**Class Characteristics:** features which identify an object as being a member of a group of similar objects

**Concentric:** having a common center

**Cross-section:** cut at a right angle to the long axis

**Dahllite:** a calcium phosphate mineral which comprises the majority of the tooth mass

**Dentine:** a mineralized dental tissue which serves as a temporary or permanent outer covering of a tooth or tusk

**Enamel:** a mineralized dental tissue which serves as a temporary or permanent outer covering of a tooth or tusk

**Extant:** in existence, not destroyed or lost

**Extinct:** no longer in existence, died out

**FT-IR (Fourier Transform Infrared Spectroscopy):** a non-destructive technique for the chemical analysis of materials based upon molecular interaction with infrared radiation. The analytical product of this technique is expressed in an inter ferogram

**Fossilization:** the process of replacement of naturally occurring components of a tusk or tooth with the elemental components of its environment

**Haversian System:** a series of interconnecting fluid transport spaces within a bone

**Hypercementosis:** a condition which results in unusually large depositions of cementum on a tooth

**Interstitial Zone:** an intervening space between convergent areas of dentine

**Macroscopic:** large enough to be observed with the unaided eye

**Mandible:** the lower jawbone

**Maxilla:** the upper jawbone

**Mean:** statistical average

**Microscopic:** small enough to require the use of a magnifying lens or microscope, not visible to the unaided eye

**Odontoblast:** dentine forming cell

**Pinnipedia:** the mammalian order which includes walruses

**Prismatic:** composed of prisms (crystal with specific face and edge configurations)

**Proboscidea:** the mammalian order which includes elephants and mammoths

**Schreger Pattern:** a system crossing lines which is unique to proboscidean ivory

**Scrimshaw:** engraved or shallowly carved bone or ivory

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Originally published by World Wildlife Fund and The Conservation Foundation; 1991

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# Whale teeth

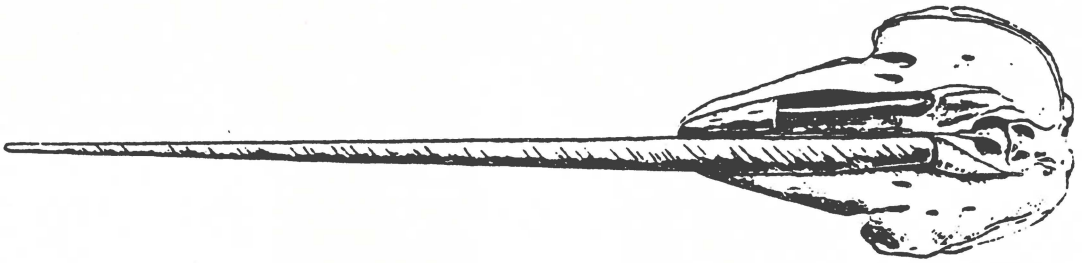
Traded materials for the cetacea include meat, oils, tusks, teeth and baleen for all species, and whole live animals for the smaller species. While meats and oils are almost impossible to identify without the use of sophisticated laboratory procedures, tusks, teeth and baleen can be identified more easily, though this can be complicated by the amount of re-working that the object has undergone.

The following information is provided as a guide to this differentiation. Whole animal identification can be accomplished by referring to the data sheets in volume 1.

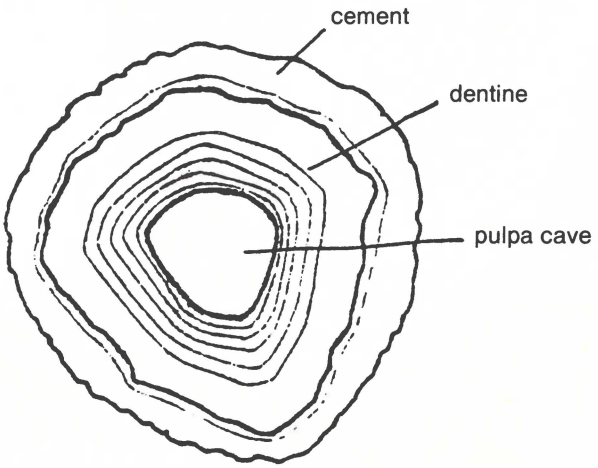
**Tusks**

The tusk of the narwhal (see sheet A-111.003.002.001 in volume 1) is often carved into various forms, but in most cases the highly diagnostic whirl of the tusk along its longitudinal axis is visible allowing for its ease identification.

The dentine is arranged in concentric layers which are visible in cross-sections of the tusk.



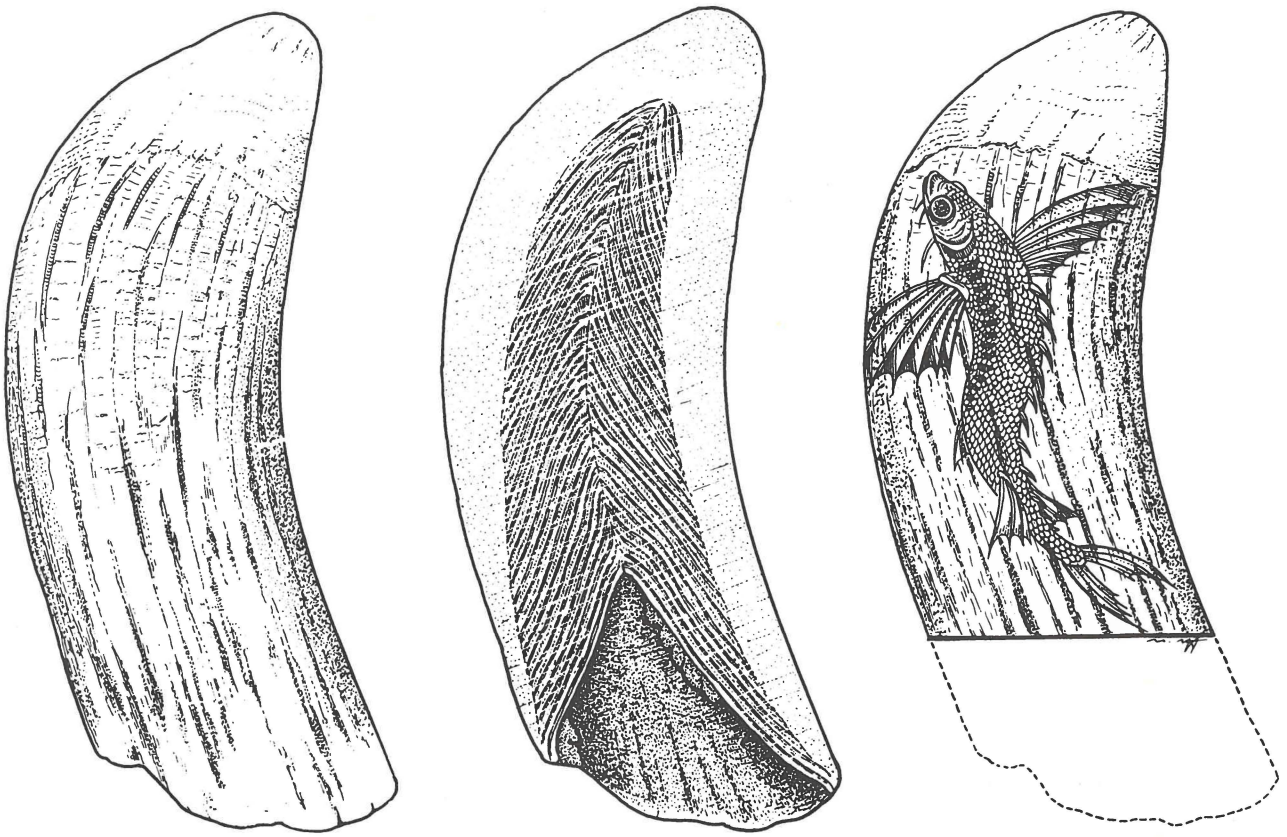
*Narwhal skull with opened intermaxillary bone*




*Cross-section through narwhal tusk, natural size*

**Sperm whale teeth**

The teeth of the sperm whale *(Physeter macrocephalus)* are another example of a cetacean part which often enters into trade. Unfortunately, the teeth are not often traded in this 'rough' form, but are more usually carved into ornate shapes or engraved producing the art-form known as 'Scrimshaw'. In this form their identification is extremely difficult, as they resemble many other types of ivory. Mixed consignments of teeth in which walrus tusk fragments with the sperm whale teeth can be seperated by examination of the teeth in cross-section. Sperm whale teeth are round or ovate, while the walrus tusk appears kidney-shaped owing to a longitudinal groove running along one side. If only small worked fragments are present, it is impossible to determine whether the source was tooth or tusk, even microscopically (Dr. E.D. Mitchell, personal communication).



*Unworked sperm whale tooth, cross-section and engraved tooth*

*Text: Mitchell M. Sisak, Montreal*
*Drawings of sperm whale teeth: Ueli Iff, Berne*
*Submitted by the Management Authorities of Canada and Switzerland*

# Baleen

**General information:**

The plates are constructed of keratin. The outer edge of each plate is smooth, while the inner edge is frayed and consists of a series of bristles or hairs which differ in appearance and number from one species to another. The baleen identification table that follows provides the information necessary to identify the source of a sample of baleen.

**Baleen identification:**

Right Whale — *Eubalaena glacialis*

- baleen up to 2.8 m in length
- narrow relative to length (ca. 30 cm)
- 220 to 260 long narrow plates
- up to 70 bristles per square cm
- bristles are fine and greyish in colour
- colour ranges from dark brown, grey to black

Bowhead Whale — *Balaena mysticetus*

- baleen longer than 2.8 m and up to more than 4 m
- narrow usually 36 cm across
- 35 to 70 bristles per square cm
- 230 to 360 plates in elach of two rows
- colour ranging from grey to black

Pygmy Right Whale — *Caperea marginata*

- possess the most flexible and tough of all baleen
- length ranges from a few cm to a maximum of 69 cm and width to 10 cm
- approximately 230 plates in each of two rows
- up to 80 bristles per square cm
- colour is pale yellowish-white with a brown fringe

Grey Whale — *Eschrichtius robustus*

- relatively small plates (up to 50 cm long and width to 25 cm)
- 130 to 180 plates per side
- up to 40 bristles per square cm
- colour usually yellowish-white
- plates on right side usually shorter than those on left side

Fin Whale — *Balaenoptera physalus*

- up to 72 cm long and width to 30 cm
- 260 to 480 plates per side
- up to 35 bristles per square cm
- right side baleen is white or yellowish-white while the rest is striped with yellowish-white and bluish-grey. Fringe is brownish-grey to greyish-white

Blue Whale — *Balaenoptera musculus*

- up to 1 m in length and width to 55 cm
- 260 to 400 plates per side
- up to 30 bristles per square cm
- short, stiff and coarse-fringed
- colour is all black

Minke Whale — *Balaenoptera acutorostrata*

- maximum length of 20 cm and width to 12 cm
- 230 to 360 plates per each of two sides
- up to 25 bristles per square cm
- colour ranging from yellowish-white to dark grey with streaking

Sei Whale — *Balaenoptera borealis*

- maximum length of 73 cm and width to 40 cm
- 300 to 410 plates per side with fine fringes
- up to 60 bristles per square cm
- colour is ash-black

Bryde's Whale — *Balaenoptera edeni*

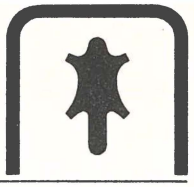
- maximum length of 42 cm and width to 24 cm
- 250 to 370 plates per side
- 15 to 35 bristles per square cm
- slate grey plates with light grey bristles

Humback Whale — *Megaptera novaeangliae*

- maximum length of 70 cm and width to 30 cm
- 270 to 400 plates per side
- up to 35 bristles per square cm
- baleen is black with olive-black bristles

Text: Mitchell M. Sisak, Montreal
Submitted by the Management Authority of Canada

# Scientific, Common and Trade Names of Mammals in the Fur Trade:



1

# Taxonomic List

Fur skins and fur products are often traded under designations, which refer to their origin, their appearance or their processing. These names are sometimes confusing and misleading, sometimes they provide a certain identification aid.

Therefore, controlling officers should be familiar with trade names, but, as a matter of principle, *identification should always be based on scientific terms and physical examination of the goods concerned.*

The present list intends to supply information on common and trade names. It does not aim to standardize or legalize these names.

The list includes names of species, which currently are, or in recent times have been, used to a certain extent in the fur trade. Not included are the different farm breeds of ruminants.

Languages taken into consideration are English, French, Russian, Spanish, German and Italian, which are the most important in the fur trade. Brazilian or Guaraní names have been included for some South-American species, and have been listed under the spanish or trade names.

Taxonomic families, within the different orders, and species, within each family, are arranged in alphabetical order, as are the names within each language.

Compiled by Peter Dollinger, Berne, François de Beaufort, Paris, John B. Heppes, Ottawa, Obdulio Menghi, Gland, Hernan Torres, Arica, Paolo Vicentini, Roma, A. Vinokurov, Moscow.
Submitted by the Management Authority of Switzerland

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Order: MARSUPIALIA

Family: Didelphidae

| | | |
|---|---|---|
| *Chironectes minimus* | E Water Opossum | |
| | Yapok | |
| | F Opossum aquatique | |
| | Yapok | |
| | R Водяной опоссум | |
| | S Chichica | "Lampara de agua" |
| | Comadreja de agua | |
| | Cuica de agua | |
| | Perrito de agua | |
| | Rata de agua | |
| | Yapó | |
| | D Schwimmbeutler | |
| | Yapok | |
| | I Chironette minimo | |
| | Yapo | |
| | Yapok | |
| *Didelphis paraguayensis* = *azarae* | E Azara's Opossum | |
| | South American Opossum | |
| | F Opossum d'Azara, Opossum d'Amérique du Sud | |
| | R Южный опоссум | |
| | S Comadreja mora | |
| | Comadreja overa | |
| | Mibicuré | |
| | Oposum | |
| | Zarigüeya | |
| | D Südopossum | "Amerik. Opossum" |
| | I Opossum dell'America meridionale | |
| *Didelphis virginiana* = *marsupialis* | E American Opossum | "Russian Marten" |
| | Common Opossum | |
| | Virginian Opossum | |
| | F Opossum commun | |
| | Opossum d'Amérique | |
| | R Северный опоссум | «Обыкновенный опоссум» |
| | S Comadreja | |
| | Muca | |
| | Oposum de America | |
| | Oposum de Virginia | |
| | Zarigüeya de Virginia | |
| | D Nordopossum | "Amerik. Opossum" |
| | I Opossum d'America | |
| | Opossum virginiano | |

Family: Macropodidae

| | | |
|---|---|---|
| *Macropus (Protemnodon, Wallabia) agilis* | E Agile Wallaby | |
| | Sandy Wallaby | |
| | F Wallabie agile | |
| | R Прыткий валлэби | |
| | Проворный кустарниковый кенгуру | |
| | S Canguro ágil | |
| | Ualabi de los arenales | |
| | D Flinkes Känguruh | |
| | I Uallabia delle sabbie | |

# Taxonomic List

| | | |
|---|---|---|
| *Macropus (Protemnodon, Wallabia) dorsalis* | E Black-striped Wallaby | |
| | F Wallabie à raies noires | |
| | R Чернополосый валлэби | |
| | Полосатый кустарниковый кенгуру | |
| | S Canguro de rayas negras | |
| | Ualabi de bandas negras | |
| | D Rückenstreifenkänguruh | |
| | I Uallabia dalle strisce nere | |
| *Macropus (Thylogale, Protemnodon) eugenii* inkl. *flindersi* | E Dama Pademelon | |
| | Flinders Island Pademelon | |
| | Tammar | |
| | F Pademelon daim | |
| | Wallabie de l'île d'Eugène | |
| | R Фландер Евгении | «Кенгуру дерби» |
| | S Canguro de la Isla de Flinders | |
| | Eugenio | |
| | Tamar | |
| | Ualabi de las matas | |
| | D Derbykänguruh | "Perlwallaby" |
| | Tammar | |
| | I Tilogale | |
| *Macropus fuliginosus* | E Western Grey Kangaroo | |
| | F Kangourou géant occidental | |
| | R Западный серый кенгуру | |
| | S Canguro ahumado | |
| | Canguro gris occidental | |
| | D Westliches Graues Riesenkänguruh | |
| | I Canguro gigante occidentale | |
| *Macropus giganteus* | E Eastern Grey Kangaroo | "Great Kangaroo" |
| | Forester Kangaroo | |
| | F Kangourou géant oriental | |
| | R Серый (исполинский) кенгуру | |
| | S Canguro gigante gris | |
| | D Graues Riesenkänguruh | |
| | I Canguro grigio gigante | |
| *Macropus (Protemnodon, Wallabia) parryi = elegans* | E Pretty-face Wallaby | |
| | Whiptail Wallaby | |
| | F Wallabie élégant | |
| | R Элегантый валлэби | |
| | S Canguro de hocico elegante | |
| | Ualabi de hocico elegante | |
| | D Hübschgesichtswallaby | |
| | Schönwallaby | |
| | I Uallabia dal muso elegante | |
| *Macropus (Osphranter) robustus* | E Euro | |
| | Wallaroo | |
| | F Wallaroo | |
| | R Горный (исполинский) кенгуру | |
| | S Canguro robusto | |
| | D Bergkänguruh | |
| | I Canguro delle rocce | |
| | Wallaroo robusto | |

| | | |
|---|---|---|
| *Macropus (Protemnodon, Wallabia) rufogriseus* (inkl. *bennetti, ruficollis)* | E Brush Wallaby | "Silver Darkside" |
| | Red-necked Wallaby | |
| | F Wallabie de Bennett | |
| | Wallabie gris-roux | |
| | R Рыжесерый валлэби | |
| | Кустарниковый кенгуру Беннетта | |
| | S Canguro rojo-gris | |
| | Ualabi de Bennett | |
| | D Bennett-Känguruh | "Buschwallaby" |
| | Rothalskänguruh | |
| | I Uallabia dal coll rosso | "Wallaby della Foresta" |
| *Magaleia rufa (Macropus rufus)* | E Red Kangaroo | |
| | F Kangourou roux | |
| | R Рыжий (исполинский) кенгуру | |
| | S Canguro rojo | |
| | D Rotes Riesenkänguruh | |
| | I Canguro gigante rosso | |
| *Petrogale penicillata* | E Brush-tailed Rock Wallaby | "Buck Wallaby" |
| | Grey Wallaby | |
| | F Wallabie de rocher à queue brosse | |
| | R Кистехвостый скалистый кенгуру | |
| | S Canguro rupestre de cola de brocha | |
| | Ualabi rupestre de cola de pincel | |
| | D Bürsten-Felsenkänguruh | "Rockwallaby" |
| | I Uallabia delle rocce dalla coda a pennello | "Wallaby di Cook" |
| *Petrogale xanthopus* | E Ringed-tail Rock Wallaby | "Yellow Wallaby" |
| | Yellow-footed Rock Wallaby | |
| | F Wallabie de rocher à queue annelée | |
| | R Кольцехвостый кенгуру | |
| | Желтоногий скалистый кенгуру | |
| | S Canguro rupestre de cola anillada | |
| | Ualabi rupestre de cola anillada | |
| | D Gelbfuss-Felsenkänguruh | |
| | Ringschwanz-Felsenkänguruh | |
| | I Uallabia delle rocce dalla coda ad anelli | |
| *Thylogale billardierii* | E Red-bellied Pademelon | |
| | Rufous-bellied Pademelon | |
| | F Pademelon à ventre roux | |
| | R Краснобрюхий филандер | «Обожженный кенгуру» |
| | S Tilogalo de Tasmania | |
| | D Rotbauchfilander | |
| | I Tilogale dal ventre rosso | |
| | Tilogale tasmaniano | |
| *Wallabia bicolor* | E Black-tailed Wallaby | |
| | Swamp Wallaby | |
| | F Wallabie bicolore | |
| | R Болотный валлэби | |
| | Чернохвостый кустарниковый кенгуру | |
| | S Canguro bicolor | |
| | Ualabi bicolor | |
| | D Sumpfwallaby | |
| | I Uallabia bicolore | "Wallaby delle Paludi" |

# Taxonomic List





Family: Phalangeridae

| | | |
|---|---|---|
| *Trichosurus vulpecula* | E Brush-tailed Phalanger | "Australian Possum"<br>"New Zealand Possum"<br>"Redneck"<br>"Tasmanian Possum"<br>"Weevilly" |
| | F Phalanger-Renard | |
| | R Лисий кузу | |
| | S Chinchilla de Adelaida<br>Falangero zorro | "Possum de Australia" |
| | D Fuchskusu | "Australisches Opossum"<br>"Neuseeländ. Opossum"<br>"Tasman. Opossum" |
| | I Tricosuro volpino | "Opossum d'Australia" |

Family: Phascolarctidae

| | | |
|---|---|---|
| *Phascolarctos cinereus* | E Koala Bear | "Wombat" |
| | F Koala | |
| | R Коала<br>Сумчатый медведь | |
| | S Coala<br>Oso marsupial<br>Perezoso de Australia | |
| | D Beutelbär<br>Koala | "Wombat" |
| | I Koala<br>Orso marsupiale | |

Order: INSECTIVORA

Family: Talpidae

| | | |
|---|---|---|
| *Desmana moschata* | E Russian Desman | "Russian Musquash"<br>"Silver Musquash" |
| | F Desman de Moscovie | "Vychuchol" |
| | R (Обыкновенная) выхухоль | «Хохуля» |
| | S Desmán almizclado | "Rata amizclera rusa" |
| | D Russischer Desman | "Silberbisam" |
| | I Desmana | "Topo muschiato della Russia" |
| *Talpa* spp. | E Moles | |
| | F Taupes | |
| | R Кроты | |
| | S Topos | |
| | D Maulwürfe | |
| | I Talpe | |

Order: PRIMATES

Family: Cercopithecidae

| | | |
|---|---|---|
| *Cercopithecus* spp.<br>(mainly *C. diana)* | E Guenons | "Grey Monkey"<br>"Red Monkey" etc. |
| | F Cercopithèques | |
| | R Мартышки | |
| | S Cercopitecos | |
| | D Meerkatzen | "Perlaffe"* |
| | I Cercopiteci | |

* = *Cercopithecus diana*

| | | |
|---|---|---|
| *Colobus guereza* | E Black-and-white Colobus | "Abyssinian Monkey" |
| | F Colobe guéréza | |
| | R Гверепа | |
| | S Colobo guereza | |
| | D Guereza | "Scheitelaffe" |
| | I Guereza coda bianca | |
| | Guereza d'Abissinia | |
| *Colobus polykomos* | E (Southern and Western) | |
| | Black-and-white Colobus | |
| | Black Monkey | |
| | F Colobe magistrat | |
| | R Королевский толстотел | |
| | S Colobo abisinio | |
| | D Südlicher Guereza | "Scheitelaffe" |
| | I Guereza dell'Africa occidentale | |

Order: LAGOMORPHA

Family: Leporidae

| | | |
|---|---|---|
| *Lepus americanus* | E Snowshoe Hare | "American Hare" |
| | | "American Rabbit" |
| | F Lièvre américain | |
| | R Американский заяц | |
| | S Liebre americana | |
| | Liebre polar | |
| | D Polarhase | "Schneehase" |
| | Schneeschuhhase | |
| | I Lepre polare | |
| *Lepus europaeus* = *capensis* | E Brown Hare | |
| | Cape Hare | |
| | European Hare | |
| | F Lièvre d'Europe | |
| | Lièvre du Cap | |
| | R Заяц-русак | |
| | S Liebre común | |
| | Liebre europea | |
| | D Europäischer Feldhase | |
| | Kaphase | |
| | I Lepre comune | |
| | Lepre grigia | |
| *Lepus sinensis* | E East Chinese Hare | |
| | F Lièvre de Chine | |
| | R Китайский заяц | |
| | S Liebre de China | |
| | D Chinesischer Hase | |
| | I Lepre della Cina | |
| *Lepus timidus* | E Blue Hare | "Foxaline" |
| | Varying Hare | "Russian Hare" |
| | F Lièvre blanc | |
| | Lièvre variable | |
| | R Заяц-беляк | |
| | S Liebre blanca | |
| | Liebre variable | |
| | D Schneehase | |
| | I Lepre bianca | |
| | Lepre variabile | |

# Taxonomic List



| | | |
|---|---|---|
| *Oryctolagus cuniculus* | E European Rabbit<br>F Lapin de garenne<br>R Дикий кролик<br>S Conejo común<br>Conejo de monte<br>D Europäisches Wildkaninchen<br>I Coniglio selvatico | "Kanin" |
| *Oryctolagus cuniculus f. domestica* | E Rabbit<br>F Lapin domestique<br>R Кролик<br>S Conejo doméstico<br>D Hauskaninchen<br>I Coniglio domestico | "Coney"<br><br><br><br>"Kanin"<br><br>many different names for dyed and sheared skins, e.g.<br>"Baby Beaver"<br>"Chinchillette"<br>"Erminette"<br>"Sealkanin"<br>"Zobelkanin" etc. |

Order: RODENTIA

Family: Castoridae

| | | |
|---|---|---|
| *Castor fiber* (inkl. *canadensis)* | E Beaver<br>F Castor<br>R Бобр<br>S Castor<br>D Biber<br>I Castoro | plucked, sheared and dyed:<br>"Beaver Royale"<br>"Phantom-Biber" |

Family: Chinchillidae

| | | |
|---|---|---|
| *Chinchilla brevicaudata* | E Short-tailed Chinchilla<br>F Chinchilla à queue courte<br>R Короткохвостая шиншилла<br>S Chinchilla de cola corta<br>Chinchilla grande<br>Chinchilla real<br>D Kurzschwanzchinchilla<br>I Chinchilla dalla coda corta | "Chinchilla"<br><br><br><br><br>"Chinchilla"<br>"Cincillà" |
| *Chinchilla laniger* | E Long-tailed Chinchilla<br>F Chinchilla à longue queue<br>R Длиннохвостая шиншилла<br>Шиншилла<br>S Chinchilla<br>Chinchilla chica<br>Chinchilla costera<br>Chinchilla de cola larga<br>Chinchilla lanigera<br>D Langschwanz-Chinchilla<br>I Cincillà lanigero<br>Chinchilla dalla coda lunga | "Chinchilla Rat"<br>"Chinchillona" |

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| | | |
|---|---|---|
| *Lagidium viscacia* | E Mountain Chinchilla | "Chinchillone" |
| | F Lagostome des montagnes | |
| | R Горная вискаша | «Пущак» |
| | S Chinchillón | |
| | Conejo de tierra | |
| | Pilquén | |
| | Vizcacha serrana | |
| | D Berg-Viscacha | "Chinchillona" |
| | Cuvier-Hasenmaus | |
| | I Viscaccia della montagna | "Cincillone" |
| *Lagostomus maximus* | E Plains Viscacha | "Chinchilla Rat" |
| | Viscacha | |
| | F Lagostome des Pampas | |
| | R Вискаша | |
| | Равнинная вискаша | |
| | S Vizcacha de las Pampas | |
| | D Feldviscacha | "Wasserschwein" |
| | Pampas-Viscacha | |
| | Viscacha | |
| | I Viscaccia delle Pampas | |
| | Viscaccia vera | |
| Family: Cricetidae | | |
| *Cricetus cricetus* | E Common Hamster | |
| | F Hamster d'Europe | |
| | R Обыкновенный хомяк | «Хомяк» |
| | S Hamster vulgar | |
| | D Feldhamster | "Hamster" |
| | I Criceto | |
| | Hamster | |
| *Ondatra zibethica* | E Muskrat | "Musk" |
| | | "Musquash" |
| | F Ondatra | |
| | Rat musqué | |
| | Rat d'Amérique | |
| | R Ондатра | «Мускусная крыса» |
| | S Ondatra | |
| | Rata almizclera | |
| | D Bisamratte | "Bisam" |
| | I Ondatra | |
| | Topo muschiato | |
| | | additional trade names mainly combinations with ". . . . Rat" e.g.: "Silver Rat", "Texas Rat" plucked, sheared and dyed: "Hudson Seal", "Rice Cake Seal" dyed, let out: "Delta Rat", "River Mink" |
| Family: Ctenomyidae | | |
| *Ctenomys* spp. | E Tuco-tucos | |
| | F Tuco-tucos | "Tucan" |
| | R Туко-туко | |
| | S Ocultos | |
| | Tuco-tucos | |
| | D Tukotukos | "Chinchillaratte" |
| | I Tuco-tuco | |

# Taxonomic List



Family: Myopotamidae

| | | |
|---|---|---|
| *Myocastor coypus* | E Coypu | "Nutria Seal" |
| | Nutria | "South American Beaver" |
| | F Myocastor | |
| | Myopotame | |
| | Ragondin | |
| | R Нутрия | «Болотный бобр» |
| | S Castoril | "Montevideos" |
| | Coipú | "Paranas" |
| | Nutria de pantano | |
| | Nutria roedora | |
| | Quiya | |
| | D Biberratte | "Otternutria" |
| | Nutria | |
| | Sumpfbiber | |
| | I Castorino | |
| | Castoro delle paludi | |
| | Nutria | |

Family: Pedetidae

| | | |
|---|---|---|
| *Pedetes capensis* | E Cape Jumping Hare | |
| | Spring Hare | |
| | Springhare | |
| | F Lièvre sauteur | |
| | R Долгоног | |
| | S Liebre saltadora cafre | |
| | Liebre saltadora del Cabo | |
| | D Springhase | |
| | I Lepre saltatrice cafra | |

Family: Rhizomyidae

| | | |
|---|---|---|
| *Rhizomys* spp. | E Bamboo Rats | "Chinese Mole" |
| *(sinensis* etc.) | F Rats des Bambous | |
| | Rat jaune | |
| | R Бамбуковая крыса | |
| | S Ratas de los Bambús | |
| | D Bambusratten | "Chinesische Ratte" |
| | | "Koreanischer Bisam" |
| | | "Zabul" |
| | | "Zapok" |
| | I Ratti del Bambu | |

Family: Sciuridae

| | | |
|---|---|---|
| *Funambulus* spp. | E Palm Squirrels | |
| | Tree Squirrels | |
| | F Ecureuils des palmes | |
| | Ecureuils palmistes | |
| | R Пальмовые белки | |
| | Пальмовая белка | |
| | S Ardillas de las palmeras | |
| | D Palmhörnchen | |
| | Palmenhörnchen | |
| | I Funamboli | |
| | Scoiattoli delle palme | |

| | | |
|---|---|---|
| *Glaucomys* spp.<br>*(volans, sabrinus)* | E Flying Squirrels<br>F Ecureuils volants<br>R Американские летяги<br>S Ardillas voladoras<br>D Assapan<br>Gleithörnchen<br>I Glaucomii | «Летяги» |
| *Marmota bobak* | E Bobac Marmot<br>F Marmotte Bobac<br>R Степной сурок<br>Байбак<br>S Bobac<br>Marmota de Siberia<br>D Bobak<br>Steppenmurmeltier<br>I Bobac<br>Marmotta di Siberia | "Murmel" |
| | Trade names for subspecies mainly derived from production centres: | |
| *Marmota bobak baibacina* | "Bobac", "Murmel", "Russian Marmot", "Tarbagan" | |
| *Marmota bobak bobak* | "Kotel", "Krupny", "Mindel", "Saratov" | |
| *Marmota bobak sibirica* | "Beisky", "Chinese Marmot", "Darigan", "Mongolian Marmot", "Urga-Murmel" | |
| *Marmota monax* | E Ground Hog<br>Woodchuck<br>F Marmotte commune<br>Siffleur<br>R<br>S Marmota común<br>D Waldmurmeltier<br>I Marmotta monax | "Wheenusk" |
| *Marmota caligata*<br>*Marmota flaviventris*<br>*Marmota marmota* | Alpine and North American Marmots: not important for international fur trade | |
| *Petaurista* spp. | E Flying Squirrels<br>F Pétauristes<br>R Гигантские летяги<br>S Petauristas<br>D Gleithörnchen<br>Grossflughörnchen<br>I Petauriste<br>Taguan | "Molenda"<br>«Летяги»<br>"Fliegender Hund" |
| *Pteromys volans* | E European Flying Squirrel<br>F Palatouche<br>R Обыкновенная летяга<br>Белка-летяга<br>S Ardilla voladora<br>D Gewöhnliches Gleithörnchen<br>Kleinflughörnchen<br>I Scoiattolo volante europeo | "Molenda"<br>«Летяга»<br>"Fliegender Hund"<br>"Molenda" |

# Taxonomic List



| | | |
|---|---|---|
| *Sciurus carolinensis* | E Eastern Grey Squirrel<br>Grey Squirrel | |
| | F Ecureuil gris | |
| | R Каролинская белка<br>Американская серая белка | |
| | S Ardilla gris | |
| | D Grauhörnchen | "Amerikanisches Feh" |
| | I Scoiattolo grigio | |
| *Sciurus griseus* | E Western Grey Squirrel | |
| | F Ecureuil gris | |
| | R | |
| | S Ardilla gris | |
| | D Westliches Grauhörnchen | |
| | I Scoiattolo grigio | |
| *Sciurus vulgaris* | E European & American Tree Squirrel<br>Red Squirrel | |
| | F Ecureuil | "Petit gris" (from USSR and Canada only) |
| | R Белка<br>Обыкновенная белка | |
| | S Ardilla común | |
| | D Eichhörnchen | "Feh" (from USSR and Canada only |
| | I Scoiattolo commune | |
| | | Trade names derived from the production centre, e.g.:<br>"Altaisky"<br>"Amursky"<br>"Jakutsky"<br>"Lensky"<br>"Obsky"<br>"Saibalsky"<br>"Teleutka" etc. |
| | | and from tail colour:<br>"Blacktail"<br>"Darktail"<br>"Greytail"<br>"Redtail" etc. |
| *Spermophilus citellus*<br>*(= Citellus)* | E European Souslik | "Pechanik" |
| | F Souslik d'Europe | "Souslik(i)" |
| | R Серый суслик<br>Европейский суслик | |
| | S Ardilla de Pedregal<br>Suslik europeo | |
| | D Einfarbiges Ziesel | "Petschanik" |
| | I Citello commune | |
| *Spermophilus fulvus*<br>*(= Citellus)* | E Aral Yellow Souslik | "Pechanik" |
| | F Spermophile jaune | |
| | R Желтый суслик<br>Суслик-песчаник | |
| | S Espermófilo amarillo | |
| | D Fahlziesel | "Petschanik" |
| | Gelbziesel | "Sandmurmel" |
| | Sandziesel | |
| | I Citello giallo | |

| | | |
|---|---|---|
| *Spermophilus suslicus (= Citellus)* | E Spotted Souslik | "Pearl Suslik" |
| | | "Snowflake Suslik" |
| | F Souslik tacheté | |
| | R Крапчатый суслик | |
| | S Suslik manchado | |
| | D Perlziesel | "Perlsuslik(i)" |
| | I Suslik | |
| *Spermophilus undulatus (= Citellus)* | E Arctic Ground Squirrel | "Peschlik" |
| | F Souslik de Parry | |
| | R (Длиннохвостый) суслик | |
| | S Suslik de Parry | |
| | D Parry-Ziesel | "Peschlik(i)" |
| | I Citello di Parry | |
| *Tamiasciurus hudsonicus* | E Chickaree | |
| | Pine Squirrel | |
| | Red Squirrel | |
| | Spruce Squirrel | |
| | F Ecureuil d'Hudson | |
| | R Красная белка | |
| | Канадская белка | |
| | S Ardilla roja (de Hudson) | |
| | D Rothörnchen | |
| | I Scoiattolo rosso | |
| *Tamias (Eutamias) sibiricus* | E Burunduk | "Burunduk(i)" |
| | F Bouroundouk | "Rat de Russie" |
| | Tamias | |
| | R Бурундук | |
| | Азиатский бурундук | |
| | S Tamia de Siberia | |
| | D Streifenhörnchen | "Burunduk" |
| | I Tamia | "Topo di Russia" |
| *Tamias striatus* | E Eastern Chipmunk | "Burunduk(i)" |
| | Hackee | |
| | F Tamias strié | |
| | R Американский бурундук | |
| | Восточный бурундук | |
| | S Cipmunk oriental | |
| | Tamia estriado | |
| | D Streifenbackenhörnchen | "Chipmunk" |
| | I Tamia striato | |

Order: CARNIVORA

Family: Canidae

| | | |
|---|---|---|
| *Alopex lagopus* | E Arctic Fox | "Blue Fox" |
| | | "White Fox" |
| | F Renard polaire | "Renard blanc" |
| | | "Renard bleu" |
| | R Песец | «Голубой песец» |
| | S Zorro ártico | "Zorro azul" |
| | Zorro polar | "Zorro blanco" |
| | D Eisfuchs | "Blaufuchs" |
| | Polarfuchs | "Weissfuchs" |
| | I Volpe artica | "Volpe azzurra" |
| | Volpe polare | "Volpe bianca" |

# Taxonomic List



| | | |
|---|---|---|
| *Canis aureus* | E Common Jackal | "Jackal" |
| | Golden Jackal | |
| | F Chacal commun | "Chacal" |
| | R Шакал | |
| | S Chacal común | |
| | Chacal dorado | |
| | D Goldschakal | "Schakal" |
| | I Sciacallo comune | |
| | Sciacallo dorato | |
| *Canis latrans* | E Brush Wolf | "Prairie Wolf" |
| | Coyote | Garments traded |
| | Prairie Wolf | as "Wolf" |
| | F Coyote | "Coyote" |
| | R Койот | |
| | S Coyote | |
| | Lobo da las estepas | |
| | Perro de las praderas | |
| | Perro ladrador | |
| | D Heulwolf | "Wolf" |
| | Kojote | |
| | I Coyote | |
| | Lupo della prateria | |
| *Canis lupus f. familiaris* | E Domestico Dog | "Dogskin" |
| | | "Goupee" |
| | F Chien domestique | "Loup de Chine" |
| | | "Loup de Mongolie" |
| | R Собака | |
| | Домашняя собака | |
| | S Perro domestico | |
| | D Haushund | "Gae-Wolf" |
| | | "Gubi" |
| | | "Koreawolf" |
| | | "Sobaki" |
| | I Cane domestico | |
| *Canis lupus* | E Gray Wolf | "Wolf" |
| | Timber Wolf | |
| | F Loup commun | |
| | R Волк | «Серый волк» |
| | S Lobo | |
| | D Wolf | |
| | I Lupo | |
| *Canis mesomelas* | E Black-backed Jackal | "Cape Jackal" |
| | F Chacal à chabraque | |
| | R Чепрачный шакал | |
| | S Chacal de lomo negro | |
| | D Schabrackenschakal | |
| | I Sciacallo dalla gualdrappa | |

| | | | |
|---|---|---|---|
| *Cerdocyon thous* | E | Crab-eating Fox | |
| | | Forest Fox | |
| | | Savanna Fox | |
| | F | Renard crabier | |
| | R | Майконя | |
| | | Лисица-майконя | |
| | S | Aguará | |
| | | Zorro cangrejero | |
| | | Zorro carbonero | |
| | | Zorro de monte | |
| | | Zorro rojizo | |
| | | Zorro perro | |
| | D | Maikong | |
| | | Waldfuchs | |
| | I | Volpe sciacallo | |
| *Cuon alpinus* | E | Red Dog | |
| | | Dhole | |
| | F | Cuon d'Asie | "Loup de Chine" |
| | | | "Chien de Chine" |
| | R | Красный волк | |
| | S | Perro salvaje asiático | |
| | D | Rothund | |
| | I | Cuon alpino | |
| *Dusicyon culpaeus (= culpaeolus, magellanicus)* | E | Andean Wolf | "Magellanic Fox" |
| | | Colpeo Fox | |
| | F | Renard colfeo | |
| | | Colfou | |
| | R | Андская лисица | «Андский шакал» |
| | S | Culpeo | "Tierra del Fuego" |
| | | Perro de Patagonia | |
| | | Zorro andino | |
| | | Zorro colorado | |
| | D | Andenschakal | "Feuerlandfuchs" |
| | | | "Magellanfuchs" |
| | | | "Patagonischer Fuchs" |
| | I | Volpe di Patagonia | |
| *Dusicyon (= Pseudalopex) griseus* * | E | Argentine Fox | "Chubut" |
| | | Little Grey Fox | |
| | | Pampas Fox | |
| | F | Renard gris de l'Argentine | |
| | R | Аргентинская лисица | |
| | | Южноамериканская лисица | |
| | S | Chilla | |
| | | Zorro gris | |
| | D | Argentinischer Graufuchs | "Magellan" |
| | | | "Mendoza" |
| | | | "Rio-Chubut" |
| | | | "Rio-Negro" |
| | | | "Sta Cruz" |
| | | | Switz.: "Südamerikanischer Grisfuchs" |
| | I | Volpe grigia dell'Argentina | |

* Formerly designated as *D. azarae* by several authors

# Taxonomic List

| | | | |
|---|---|---|---|
| *Dusicyon (= Pseudalopex) gymnocercus* * | E | Pampas Fox | |
| | | Paraguayan Fox | |
| | F | Renard d'Azara | |
| | R | Пампаская лисица | |
| | | Парагваиская лисица | |
| | S | Aguarachay | "Cordoba" |
| | | Zorro gris (de las pampas) | "Entre Rios" |
| | | Zorro pampeano | "Pampas" |
| | | | "Provincia" |
| | | | "San Luis" |
| | D | Pampasfuchs | "Azarafuchs" |
| | | | Switz.: "Südamerikanischer Grisfuchs" |
| | I | Volpe azara | |
| | | Volpe sudamericana | "Aguarachai" |
| | | Volpe grigia delle Pampas | |
| *Dusicyon (= Pseudalopex) sechurae* | E | Sechura Fox | |
| | F | | |
| | R | Сечурская лисица | |
| | S | Zorro costero | |
| | | Zorro de Sechura | |
| | D | Sechurafuchs | |
| | I | Volpe di Sechura | |
| *Dusicyon (= Lycalopex) vetulus* * | E | Field Fox | |
| | | Hoary Fox | |
| | | Small-toothed Dog | |
| | F | Renard grisonnant | |
| | R | Бразильская лисица | |
| | S | Jaguapitango | |
| | D | Brasilianischer Kampfuchs | |
| | I | Volpe di campo | |
| *Nyctereutes procyonoides* | E | Raccoon-Dog | "Finnraccoon" |
| | | Asiatic Raccoon-Dog | "Russian Raccoon" |
| | | | "Sea Fox" |
| | F | Chien viverrin | "Renard de mer" |
| | | | "Loup du Japon" |
| | R | Енотовидная собака | «Уссурийский енот» |
| | S | Perro mapache | "Tanuki" |
| | | Perro martero | "Zorro marino" |
| | D | Enok | "Seefuchs" |
| | | Marderhund | "Tanuki" |
| | I | Cane viverrino | "Volpe marino" |
| *Urocyon cinereoargenteus* | E | Grey Fox | |
| | | Virginian Fox | |
| | F | Renard gris américain | |
| | | Renard de Virginie | |
| | R | Серая лисица | |
| | S | Chacalillo | |
| | | Zorro gris | |
| | D | Festland-Graufuchs | "Grisfuchs" |
| | I | Volpe grigia | |
| *Vulpes bengalensis* | E | Bengal Fox | "King-Fox" |
| | F | Renard du Bengale | |
| | R | Бенгальская лисица | |
| | S | Zorro de Bengala | |
| | D | Bengalfuchs | |
| | I | Volpe del Bengala | |

* Formerly designated as *D. azarae* by several authors

| | | |
|---|---|---|
| *Vulpes cana* (= canus) | E Blanford's Fox | |
| | Hoary Fox | |
| | F Renard de Blanford | |
| | R Афганская лисица | |
| | S Zorro de Blanford | |
| | D Afghanfuchs | |
| | I Volpe di Blanford | |
| *Vulpes corsac* | E Korsak | |
| | F Renard corsac | |
| | Renard des steppes | |
| | R Корсак | |
| | Лисица-корсак | |
| | S Kirsa | |
| | Zorro corsak | |
| | D Korsak | "Asiatischer Kitfuchs" |
| | Korsuk | "Mongolischer Kitfuchs" |
| | Steppenfuchs | |
| | I Volpe corsac | |
| | Volpe delle steppe | |
| *Vulpes ferrilata* | E Tibetan Sand Fox | |
| | F Renard sable du Thibet | |
| | R Тибетская лисица | |
| | S Zorro de las arenas de Tibet | |
| | D Tibetfuchs | |
| | I Volpe delle sabbie tibetana | |
| *Vulpes macrotis* | E Kit Fox | "Kitt Fox" |
| | F Renard kit | |
| | R Большеухий американский корсак | |
| | S Zorro enano americano | |
| | Zorro orejudo | |
| | D Grossohr-Kitfuchs | "Kitfuchs" |
| | I Volpe kit | |
| *Vulpes velox* | E Swift Fox | "Kitt Fox" |
| | F Renard véloce | |
| | R Американский корсак | «Быстроногая лисица» |
| | Проворная лисица | |
| | S Zorro veloz | |
| | D Swiftfuchs | "Kitfuchs" |
| | | "Swiftfuchs" |
| | I Volpe veloce | |
| *Vulpes vulpes* | E Red Fox | |
| (incl. *V. fulva*) | F Renard rouge | |
| | Renard roux | |
| | R Лисица | «Лиса» |
| | Красная лиса | «Рыжая лисица» |
| | S Zorro común | |
| | Zorro rojo | |
| | D Rotfuchs | "Birkfuchs" |
| | | "Brandfuchs" |
| | | "Kohlfuchs" |
| | I Volpe rossa | |

# Taxonomic List



| | | |
|---|---|---|
| Variations / Farm breed | E | "Cross Fox" |
| | F | "Renard croisé" |
| | R | «Крестовка»<br>«Лисица-крестовка»<br>«Сиводушка» |
| | S | "Zorro cruzado" |
| | D | "Kreuzfuchs" |
| | I | "Volpe incrociata" |
| | E | "Silver Fox" |
| | F | "Renard argenté" |
| | R | «Чернобурая лисица»<br>«Серебристая лисица» |
| | S | "Zorro plateado" |
| | D | "Silberfuchs" |
| | I | "Volpe argentata" |
| | E | "Platinum Fox" |
| | F | "Renard platiné" |
| | R | «Платиновая лисица» |
| | S | "Zorro platino" |
| | D | "Platinfuchs" |
| | I | "Volpe platinata" |
| | E | "Glacier Blue Fox"<br>"Patch Fox"<br>"Pearl Platin Fox"<br>"Snow Fox"<br>"Whiteface Fox" etc. |
| | R | «Снежная лиса»<br>«Белая лиса»<br>«Трехцветная лиса» |
| | | additional trade names derived from the production centres (USSR standard: 38 different origins) |

Family: Felidae

| | | |
|---|---|---|
| *Acinonyx jubatus* | E Cheetah | |
| | F Guépard | |
| | R Гепард<br>Пардус | |
| | S Guepardo | |
| | D Gepard | |
| | I Ghepardo | |
| *Felis (Profelis) aurata* | E African Golden Cat | "African Leopard Cat" |
| | F Chat doré d'Afrique | |
| | R Золотая кошка | |
| | S Gato dorado africano | |
| | D Afrikanische Goldkatze | |
| | I Gatto dorato africano | |

| | | |
|---|---|---|
| *Felis (Prionailurus) bengalensis* | E Leopard Cat | "Lipiskin" |
| | F Chat léopard du Bengal | "Chat lipi" |
| | R Бенгальская кошка | |
| | S Gato bengalí | "Gato leopardo" |
| | Gato de Bengala | |
| | D Bengalkatze | "Chinakatze" |
| | | "Leopardkatze" |
| | I Gatto del Bengala | "Gatto tigre" |
| | Gatto leopardo | |
| *Felis (Lynx) caracal* | E Caracal Lynx | |
| | F Caracal | |
| | R Каракал | |
| | S Caracal | |
| | Lince de las estepas | |
| | D Karakal | |
| | Wüstenluchs | |
| | I Caracal | |
| | Lince del deserto | |
| *Felis chaus* | E Jungle Cat | "Samacha" |
| | F Chat de jungle | |
| | R Камышовый кот | |
| | Хаус | |
| | S Gato de la jungla | |
| | Gato de los pantanos | |
| | D Rohrkatze | "Dschungelkatze" |
| | Sumpfluchs | "Holzkatze" |
| | I Gatto della giungla | |
| | Lince delle paludi | |
| *Felis (Puma) concolor* | E Cougar | "Silver Lion" |
| | Puma | |
| | F Puma | |
| | R Пума | «Кугуар» |
| | S León americano | |
| | León bayo | |
| | Onza bermeja | |
| | Puma | |
| | D Puma | |
| | Silberlöwe | |
| | I Leone argentato | |
| | Puma | |
| *Felis (Oncifelis) geoffroyi* | E Geoffroy's Cat | |
| | F Chat de Geoffroy | |
| | R Кошка жоффруа | |
| | S Gato de mato | |
| | Gato montés común | |
| | Mbaracaya | |
| | D Geoffroykatze | "Chacokatze" |
| | Kleinfleckkatze | "Mendozakatze" |
| | Salzkatze | "Südamerik. Wildkatze" |
| | | "Tigerkatze" |
| | I Gatto di Geoffroy | |
| | Gatto di monte | |

# Taxonomic List



| | | |
|---|---|---|
| *Felis (Oreailurus) jacobita* | E Mountain Cat | |
| | F Chat des Andes | |
| | R Андская кошка | |
| | S Chinchay | |
| | Gato andino | |
| | Gato lince | |
| | D Bergkatze | |
| | I Gatto delle Ande | |
| *Felis (Lynx) lynx* (incl. *canadensis, pardina)* | E Lynx | |
| | F Lynx | |
| | R Рысь | |
| | S Lince | |
| | D Luchs (Nordluchs, Pardelluchs, Kanadaluchs etc.) | "Silberluchs" |
| | I Lince | |
| *Felis (Otocolobus) manul* | E Manul | |
| | Pallas Cat | |
| | F Chat manul | |
| | R Манул | |
| | S Gato de Pallas | |
| | Gato manul | |
| | D Manul | |
| | I Gatto di Pallas | |
| | Manul | |
| *Felis (Oncifelis) pajeros (= colocolo)* | E Molina's Guiana Cat | "Pajonal Cat" |
| | Pampas Cat | |
| | F Chat des pampas | |
| | R Пампаская кошка | |
| | S Gato de los pajonales | |
| | Gato montés | |
| | Gato pajero | |
| | Osio | |
| | D Pampaskatze | "Südamerik. Luchskatze" |
| | I Gatto delle pampas | |
| *Felis (Leopardus) pardalis* | E Ocelot | |
| | F Ocelot | |
| | R Оцелот | |
| | S Gato onza | |
| | Manigordo | |
| | Ocelote | |
| | Tigrillo | |
| | Yagua-tirica | |
| | D Ozelot | |
| | I Gattopardo americano | |
| | Ocelotto | |
| *Felis rufa (= Lynx rufus, Lynx striatus)* | E Bay Lynx | "Lynx Cat" |
| | Bob Cat | |
| | F Lynx roux | "Chat lynx" |
| | R Рыжая рысь | |
| | S Lince rojo | "Lince bandechado" |
| | D Rotluchs | "Bobcat" |
| | | "Luchskatze"/"Streifenluchs" |
| | I Lince rossa | "Lince striata" |

| | | |
|---|---|---|
| *Felis (Leptailurus) serval* (incl. *servalina)* | E Serval | |
| | F Serval | |
| | R Сервал | |
| | S Serval | |
| | D Serval | "Servalkatze" |
| | I (Gatto) Servale | |
| | Gattopardo africano | |
| *Felis silvestris* (incl. *lybica, ornata)* | E Wild Cat | |
| | F Chat sauvage | |
| | R Дикая кошка | |
| | Лесний кот | |
| | S Gato montés | |
| | Gato silvestre | |
| | D Falbkatze | "Holzkatze" |
| | Wildkatze | |
| | I Gatto fulvo | |
| | Gatto ornato | |
| | Gatto selvatico | |
| *Felis silvestris f. catus* | E Domestic Cat | |
| | F Chat domestique | |
| | R Домашняя кошка | |
| | S Gato domestico | |
| | D Hauskatze | "Chinchillakatze" |
| | | "Cypernkatze" |
| | | "Feuerkatze" |
| | | "Genottekatze" |
| | | "Karthäuserkatze" |
| | | "Lyrenkatze" |
| | | "Marmorkatze" |
| | | "Müllerkatze" |
| | | "Räderkatze" |
| | | "Scheckenkatze" |
| | | "Siamkatze" |
| | | "Tigerkatze" |
| | I Gatto domestico | |
| *Felis (Profelis) temmincki* | E Temminck's Golden Cat | |
| | F Chat doré d'Asie | |
| | R Кошка темминка | |
| | S Gato dorado asiático | |
| | D Asiatische Goldkatze | |
| | I Gatto di Temminck | |
| | Gatto dorato asiatico | |
| *Felis tigrina* (= *Leopardus tigrinus* *Felis pardinoides)* | E Tiger Cat | "Leopard Cat" |
| | F Chat tigre | |
| | R Онцилла | |
| | Тигровая кошка | |
| | S Caucel | "Mineiros" |
| | Chiví | "Orientales" |
| | Gato tigre | "Pintados" |
| | Margay | |
| | Mbarakaya | |
| | Tigrillo | |
| | Tirica | |
| | D Zwergtigerkatze | "Bahiakatze" |
| | | "Cearakatze" |
| | | "Mato Grossokatze" |
| | | "Ozelotkatze" |
| | | "Südamerik. Wildkatze" |
| | I Gatto tigre | |
| | Tigrillo | |

# Taxonomic List



| | | |
|---|---|---|
| *Felis viverrina*<br>*(= Prionailurus viverrinus)* | E Fishing Cat<br>F Chat pêcheur<br>R Крашчатая кошка<br>Кошка-рыболов<br>S Gato pescador<br>D Fischkatze<br>I Gatto pescatore | |
| *Felis (Leopardus) wiedii* | E Margay Cat<br>F Margay<br>R Американская кошка<br>S Caucel<br>Chiví<br>Cunaguaro<br>Gato montés<br>Huamburushu<br>Margay<br>Mbarakayá<br>Tigrillo<br>D Langschwanzkatze<br>I Margay | "Ocelot Cat"<br><br><br><br><br><br><br><br><br>"Baumozelot"<br>"Peluda"<br>"Peludo" |
| *Felis (Herpailurus) yagouaroundi* | E Eyra Cat<br>Jaguarondi<br>F Jaguarondi<br>R Ягуарунди<br>S Gato colorado<br>Gato moro<br>Léon breñero<br>Leoncillo<br>Mbarakaya-cira<br>Onza<br>Tigrillo<br>Yaguarundí<br>D Eyra<br>Jaguarundi<br>Wieselkatze<br>I Gatto moro<br>Yaguarondi | |
| *Neofelis nebulosa* | E Clouded Leopard<br>F Panthère longibande<br>Panthère nébuleuse<br>R Дымчатый леопард<br>S Pantera longibanda<br>Pantera nebulosa<br>Tigre longibando<br>D Nebelparder<br>I Pantera nebulosa | "Clouded Tiger"<br><br><br><br><br><br><br>"Nebelparder"<br>"Schildkrötenleopard" |
| *Panthera leo* | E Lion<br>F Lion<br>R Лев<br>S León<br>D Löwe<br>I Leone | |

| | | |
|---|---|---|
| *Panthera onca* | E Jaguar<br>F Jaguar<br>R Ягуар<br>S Jaguar<br>S Jaguar<br>Otorongo<br>Tigre americano<br>Yaguar<br>Yaguarete<br>D Jaguar<br>I Giaguaro | |
| *Panthera pardus* | E Leopard<br>F Leopard<br>Panthère<br>R Леопард<br>Барс<br>S Leopardo<br>D Leopard<br>Panther<br>I Leopardo<br>Pantera | |
| *Panthera tigris* | E Tiger<br>F Tigre d'Asie<br>R Тигр<br>S Tigre<br>D Tiger<br>I Tigre | |
| *Uncia uncia* | E Snow Leopard<br>F Panthère des neiges<br>R Снежный барс<br>Ирбис<br>S Leopard nival<br>Pantera de las nieves<br>D Irbis<br>Schneeleopard<br>I Irbis<br>Leopardo delle nevi | "Ounce" |
| Family: Hyaenidae | | |
| *Proteles cristatus* | E Earth-Wolf<br>F Protèle<br>R Земляной волк<br>S Lobo de tierra<br>D Erdwolf<br>Zibethyäne<br>I Protele crestato | |
| Family: Mustelidae | | |
| *Amblonyx cinerea* | E Oriental Small-clawed Otter<br>F Loutre cendrée<br>R Серая выдра<br>S Nutria cenicienta<br>Nutria inerme asiática<br>D Zwergotter<br>I Lontra nana<br>Lontra senza unghie | "Calcutta Otter"<br>"India Otter" |

# Taxonomic List



*Aonyx capensis*

E Cape Clawless Otter
F Loutre à joues blanches
R Капская выдра
S Nutria africana
D Kapotter
Weisswangenotter
I Aonice capensi
Lontra dalle guance bianche

*Aonyx congica*

E Congo Clawless Otter
F Loutre à joues blanches du Congo
R Африканская выдра
S Nutria del Congo
D Kongo-Kleinkrallenotter
Kongo-Weisswangenotter
I Lontra dalle guance bianche del Congo

*Aonyx microdon*

E Cameroon Clawless Otter
F Paraonyx tacheté
R Камерунская выдра
S Nutria inerme del Camerún
D Fleckenotter
I Lontra senza unghia del Camerún

*Aonyx phillipsi*

E Phillip's Clawless Otter
F Paraonyx de Phillips
R Африканская выдра филиппса
S Nutria de Phillips
D Phillips Kleinkrallenotter
I Lontra senza unghia di Phillips

*Conepatus castaneus*

E
F
R
S

D
I

*Conepatus chinga*

E Chilean Skunk
F Moufette du Chili
R Южноамериканский скунс
S Chinga
Chingue
Mofeta de Chile
Zorrino de Chile
D Chile-Skunk
I Moffetta del Cile

*Conepatus humboldti*

E Patagonian Skunk "Kalmuchita"
F Moufette de Patagonie "Zorrino"
R Скунс Гумбольдта
Патагонский скунс
S Chingue
Mofeta patagónica
Zorrino patagónico
D Patagonischer Skunk "Zorrino"
I Zorrino della Patagonia

| | | |
|---|---|---|
| *Conepatus leuconotus* | E Hog-nosed Skunk | |
| | F Moufette à nez de cochon | |
| | R Восточномексиканский скунс | |
| | S Mofeta de nariz de cerdo | |
| | Zorrino de nariz de cerdo | |
| | D Ferkelskunk | |
| | I Moffetta a naso di maiale | |
| *Conepatus mesoleucus* | E | |
| | F | |
| | R | |
| | S | |
| | D | |
| | I Zorrino comune | |
| *Conepatus rex* | E Andean Skunk | |
| | F Moufette des Andes | |
| | R | |
| | S Mofeta de los Andes | |
| | D Andenskunk | |
| | I Moffetta delle Ande | |
| *Conepatus semistriatus* | E Amazonian Skunk | |
| | F Moufette d'Amazonie | |
| | R Полуполосый скунс | |
| | Амазонский скунс | |
| | S Mofeta del Amazonas | |
| | Zorrino del Amazonas | |
| | D Amazonas-Skunk | |
| | I Skunk delle Amazzoni | |
| *Eira (= Galera) barbara* | E Tayra | |
| | F Tayra | |
| | R Тайра | |
| | S Hurón mayor | |
| | Wamingo | |
| | Zorro guache | |
| | D Hyrare | |
| | Tayra | |
| | I Taira | |
| | Urone | |
| *Enhydra lutris* | E Sea Otter | |
| | F Loutre de mer | |
| | R Калан | |
| | Морская выдра | |
| | S Nutria del Kamtchatka | |
| | Nutria marina | |
| | D Kalan | "Kamtschatka-Biber" |
| | Seeotter | |
| | I Lontra del Camciatca | |
| | Lontra marina | |
| *Galictis cuja* | E Lesser Grison | |
| | F Petit grison | |
| | R | |
| | S Hurón menor | |
| | D Kleingrison | |
| | I Grigione piccolo | |

# Taxonomic List



| | | |
|---|---|---|
| *Galictis vittata* | E Allamand's Grison | |
| | F Grison d'Allamand | |
| | R Большой гризон | |
| | Гризон | |
| | S Hurón menor | |
| | Quique | |
| | Vontsira malgache | |
| | D Grossgrison | |
| | I Grigione vittato | |
| *Gulo gulo* | E Glutton | |
| | Wolverine | |
| | F Glouton | |
| | R Росомаха | |
| | S Glotón | |
| | D Järv | |
| | Vielfrass | |
| | I Ghiottone | |
| | Volverine | |
| *Ictonyx striatus* | E Zorilla | |
| *(= Zorilla striata)* | F Zorille commun | |
| | R Африканский хорек | |
| | Цорилла | |
| | S Zorilla común | |
| | Zorilla rayada | |
| | D Zorilla | "Kapiltis" |
| | | "Kapskunk" |
| | I Zorilla | |
| *Lutra annectens* | E Southern River Otter | "South American Otter" |
| *(= longicaudis)* | F Loutre à longue queue | |
| | R Мексиканская выдра | «Среднеамериканская выдра» |
| | Длиннохвостая выдра | |
| | S Nutria | |
| | Nutria del noroeste | |
| | D Mittelamerikanischer Fischotter | |
| | I Lontra dell'America centrale | |
| *Lutra (Lontra) canadensis* | E River Otter | |
| | F Loutre du Canada | |
| | R Канадская выдра | |
| | Североамериканская выдра | |
| | S Nutria del Canadá | |
| | Nutria norteamericana | |
| | D Kanada-Otter | "Virgin. Otter" |
| | Nordamerikanischer Fischotter | "Florida-Otter" |
| | I Lontra canadese | |
| *Lutra enudris* | E Brazilian River Otter | "South American Otter" |
| *(= annectens?)* | F Loutre du Brésil | |
| | R Гвианская выдра | |
| | S Lobito de río | |
| | Nutria brasileña | |
| | Nutria del Brasil | |
| | D Brasilianischer Flussotter | |
| | I Lontra del Brasile | |

| | | |
|---|---|---|
| *Lutra incarum* | E | "South American Otter" |
| *(= annectens)* | F Loutre du Pérou | |
| | R Перуанская выдра | |
| | S Lobito de río | |
| | Nutria de río | |
| | Nutria del Perú | |
| | Nutria peruana | |
| | D Peru-Otter | |
| | I Lontra del Peru | |
| *Lutra lutra* | E River Otter | "Black Otter" |
| | | "Land Otter" |
| | F Loutre de rivière | |
| | R Выдра | «Порешня» |
| | Речная выдра | |
| | S Lutra | |
| | Nutria común | |
| | D Eurasischer Fischotter | "Bagdadotter" |
| | | "Burmaotter" |
| | | "Otter" |
| | I Lontra comune | |
| | Lontra di fiume | |
| *Lutra maculicollis* | E Spotted-necked Otter | |
| *(= Hydrictis)* | F Loutre à cou tacheté | |
| | R Белогорлая выдра | |
| | Пятнистая выдра | |
| | S Nutria de cuello manchado | |
| | D Fleckenhalsotter | "Kongootter" |
| | | "Rhodesia-Otter" |
| | I Lontra dal collo macchiato | |
| *Lutra mesopetes* | E | "South American Otter" |
| *(= annectens)* | F Loutre du Costa Rica | |
| | R Коста-риканская выдра | |
| | S Nutria de Costa Rica | |
| | D Costa Rica-Otter | |
| | I Lontra di Costa Rica | |
| *Lutra platensis* | E La Plata Otter | "Washback" |
| *(= annectens)* | F Loutre d'Amérique du Sud | |
| | R Лаплатская выдра | |
| | S Gato de agua | |
| | Lobito de río | |
| | Lobo-pé | |
| | Lutra del Plata | |
| | Nutria del Plata | |
| | D La Plata-Otter | |
| | I Lontra del Rio della Plata | |
| *Lutra provocax* | E Southern River Otter | "Washback" |
| | F Loutre du Chili | |
| | R Южная (речная) выдра | |
| | S Huillín | |
| | Lobito patagónico | |
| | Nutria de Chile | |
| | Nutria patagónica | |
| | D Südlicher Flussotter | |
| | I Lontra del Cile | |

# Taxonomic List



| | | |
|---|---|---|
| *Lutra sumatrana* | E Hairy-nosed Otter | |
| | F Loutre de Sumatra | |
| | R Суматранская выдра | |
| | S Nutria de Sumatra | |
| | D Haarnasenotter | |
| | I Lontra del naso peloso | |
| *Lutrogale perspicillata* | E Indian Smooth-coated Otter | |
| | F Loutre d'Asie | |
| | R Гладкошерстная выдра | |
| | S Nutria lisa | |
| | Nutria simung | |
| | D Indischer Fischotter | |
| | I Lontra asiatica | |
| *Martes americana* | E American Marten | "Canadian Marten" |
| | | "Canadian Sable" |
| | F Martre américaine | "Zibelline du Canada" |
| | R Американская куница | «Американский соболь» |
| | S Marta cebellina americana | |
| | D Fichtenmarder | "Amerikanischer Zobel" |
| | I Martora americana | "Zibellino americano" |
| *Martes flavigula* | E Indian Marten | |
| | F Martre de l'Inde | |
| | R Харза | |
| | S Marta de la India | |
| | D Buntmarder | "Pinemarten" |
| | Charsamarder | |
| | I Martora di Charsa | |
| *Martes foina* | E Beach Marten | |
| | Stone Marten | |
| | F Fouine | |
| | R Каменная куница | «Белодушка» |
| | S Fuina | |
| | Garduna | |
| | D Hausmarder | |
| | Steinmarder | |
| | I Faina | |
| | Martora di Francia | |
| *Martes martes* | E Pine Marten | |
| | F Martre des pins | |
| | R Лесная куница | |
| | S Marta (silvestre) | |
| | D Baummarder | |
| | Edelmarder | |
| | I Martora dei boschi | |
| | Martora di Prussia | |
| *Martes melampus* | E Japanese Marten | |
| | F Martre du Japon | |
| | R Японский соболь | |
| | S Marta del Japón | |
| | D Japanischer Marder | |
| | I Martora giapponese | |

| | | |
|---|---|---|
| *Martes pennanti* | E Fisher | "American Marten" |
| | Pekan | |
| | F Martre de Pennant | |
| | Pékan | |
| | R Илька | |
| | Куница-рыболов | |
| | S Marta del Canadá | "Veso de Virginia" |
| | Marta de Pennant | |
| | Pecán | |
| | D Fischermarder | "Virgin. Iltis" |
| | Pekan | |
| | I Pekan | "Puzzola della Virginia" |
| | Martora di Pennant | |
| *Martes zibellina* | E Sable | |
| | F Zibeline | |
| | R Соболь | |
| | S Cebellina | |
| | Marta zibelina | |
| | D Zobel | "Sobol" |
| | I Zibellino | |
| *Meles meles* | E Eurasian Badger | |
| | F Blaireau | |
| | R Барсук | |
| | S Tejón europeo | |
| | D Europäischer Dachs | |
| | I Tasso europeo | |
| *Mellivora capensis* | E Ratel | |
| | F Ratel | |
| | R Медоед | «Лысый барсук» |
| | S Ratel del Cabo | |
| | Tejón abejero del Cabo | |
| | D Honigdachs | |
| | I Ratels | |
| | Tasso mellivoro | |
| *Melogale* spp. | E Ferret Badgers | "Pahmi" |
| | F Blaireaux-furets | |
| | Hélicres | |
| | R Хорьковые барсуки | «Солнечные барсуки» |
| | S Tejones chinos | |
| | Tejones-Turones | |
| | D Sonnendachse | |
| | I Tassi del Sole | |
| | Tassi-topo | |
| *Mephitis macroura* | E Hooded Skunk | |
| | F Moufette de Mexico | |
| | R Мексиканский скунс | «Длиннохвостая вонючка» |
| | S Mofeta de Méjico | |
| | D Langschwanzskunk | |
| | I Moffetta dalla lunga coda | |
| | Skunk dal cappuccio | |

# Taxonomic List



| | | |
|---|---|---|
| *Mephitis mephitis* | E Striped Skunk | |
| | F Moufette | |
| | R Полосатый скунс | «Обыкновенная вонючка» |
| | S Mofeta | |
| | D Streifenskunk | |
| | I Moffetta comune | |
| | Skunk striato | |
| *Mutela altaica* | E Alpine Weasel | |
| | Mountain Weasel | |
| | F Belette des Alpes | |
| | R Солонгой | «Сусленник» |
| | S Comadreja de los Alpes | "Solongoi" |
| | D Alpenwiesel | |
| | I Donnola degli Altai | |
| *Mustela erminea* | E Ermine | |
| | Short-tailed Weasel | |
| | Stoat | |
| | F Hermine | |
| | R Горностай | |
| | S Armino | |
| | D Hermelin | |
| | I Ermellino | |
| *Mustela frenata* | E Long-tailed Weasel | "American Ermine" |
| | | "White Weasel" |
| | F Belette à longue queue | |
| | R Длиннохвостая ласка | |
| | S Collareja enfrenada | |
| | Comadreja de cola larga | |
| | D Langschwanzwiesel | |
| | I Donnola dalla lunga coda | |
| *Mustela kathiah* | E Yellow-bellied Weasel | "Pineweasel" |
| | F | |
| | R Индийский солонгой | «Желтобрюхая ласка» |
| | S Comadreja de los Pinos | |
| | D Gelbbauchwiesel | |
| | I Donnola del ventre giallo | |
| *Mustela lutreola* | E European Mink | "Marsh Otter" |
| | F Vison d'Europe | |
| | R Европейская норка, Русская норка | |
| | S Visón europeo | |
| | D Europäischer Nerz | |
| | I Visone europeo | |
| *Mustela nivalis* | E Weasel | |
| | F Belette commune | |
| | R Ласка | |
| | S Comadreja | |
| | D Maulwiesel | "Laska" (only USSR) |
| | I Donnola | |
| | Mustela delle nevi | |

| | | |
|---|---|---|
| *Mustela putorius* | E European Polecat | "Black Fitch" |
| | Fitch | "German Fitch" |
| | F Putois d'Europe | |
| | R Черный хорь | |
| | Лесной хорь (= хорек) | |
| | S Turón común | |
| | Veso negro | |
| | D Europäischer Iltis | |
| | Schwarzer Iltis | |
| | I Puzzola nera | |
| *Mustela p. eversmanni* | E Turkestan Polecat | "Russian Fitch" |
| | | "White Fitch" |
| | F Putois blanc | |
| | R Степной хорь | |
| | Белый хорь (= хорек) | |
| | S Turón blanco | "Veso de Siberia" |
| | D Steppeniltis | "Sibirischer Iltis" |
| | | "Weisser Iltis" |
| | I Puzzola bianca | |
| *Mustela sibirica* | E Siberian Weasel | "Weasel" |
| | F Belette de Sibérie | "Vison de Sibérie" |
| | R Колонок | |
| | S Comadreja de Siberia | "Visón de Siberia" |
| | D Kolonik | "Kolinsky" |
| | Erd- oder Feuermarder | "Newchang Wiesel" |
| | Sibirisches Feuerwiesel | "Sibirischer Nerz" |
| | I Visone della Siberia | |
| *M.s. itatsi* | E Japanese Weasel | "Itatsi" |
| *M.s. manchurica* | E Manchurian Weasel | |
| *M.s. sibirica* | E Siberian Weasel | "Kolinsky" |
| | I Donnola siberiana | |
| *M.s. subhemachala* | E Chinese Weasel | "Compo Weasel" |
| *Mustela vison* | E American Mink | "Mink" |
| | F Vison d'Amérique | |
| | R Американская норка | |
| | S Visón americano | |
| | D Amerikanischer Nerz | "Nerz" |
| | I Visone americano | |
| *Pteronura brasiliensis* | E Giant Otter | |
| | F Loutre géante du Brésil | |
| | R Гигантская выдра | |
| | Бразильская выдра | |
| | S Arirai | |
| | Ariranha | |
| | Lobo de río | |
| | Lobo grande de río | |
| | Nutria gigante | |
| | D Riesenotter | "Ariranha-Otter" |
| | I Lontra gigante del Brasile | "Lontra arianna" |
| | Arirai | |

# Taxonomic List

| | | |
|---|---|---|
| *Spilogale putorius* | E Spotted Skunk | "Civetcat" |
| | F Spilogale | |
| | R Пятнистыи скунс | «Малая вонючка» |
| | S Zorillo manchado | |
| | D Fleckenskunk | "Civetkatze" |
| | | "Lyraskunk" |
| | I Skunk maculato | |
| *Taxidea taxus* | E American Badger | "Blaireau" |
| | F Blaireau d'Amérique | |
| | R Американский барсук | |
| | S Tejón del Canadá | |
| | Tejón plateado | |
| | D Amerikanischer Dachs | |
| | Silberdachs | |
| | I Tasso americano | |
| | Tasso argentato | |
| *Vormela peregusna* | E Marbled Polecat | |
| | F Putois marbre | |
| | R Перевязка | |
| | S Turón atigrado | |
| | Turón búlgaro | |
| | D Tigeriltis | "Fleckeniltis" |
| | | "Pantheriltis" |
| | | "Perwitzky" |
| | I Puzzola striata | |
| | Puzzola tigrata | |
| Family: Procyonidae | | |
| *Bassariscus* spp. | E Cacomistles | "Bassarisks" |
| | Ringtails | "Miner's Cats" |
| | | "Mountain Cats" |
| | | "Ringtail Cats" |
| | F Bassaris | |
| | R Какомицли | |
| | S Cacomixtles | |
| | Gato de cola anillada | |
| | D Bassarisks | "Racoonfox" |
| | Katzenfrette | "Steinzobel" |
| | I Bassarischi | |
| *Procyon lotor* | E North American Raccoon | |
| | F Raton laveur | "Marmotte" |
| | R Енот-полоскун | «Американский енот» |
| | S Mapache | "Marmota" |
| | Oso lavador | |
| | D Nordamerikanischer Waschbär | "Schupp" |
| | I Procione lavatore | "Marmotta d'America" |
| | Orsetto lavatore | |
| Family: Ursidae | | |
| *Thalarctos maritimus* | E Polar Bear | "White Bear" |
| | F Ours blanc | |
| | R Белый медведь | |
| | S Oso blanco | |
| | Oso polar | |
| | D Eisbär | |
| | I Orso bianco | |
| | Orso polare | |

*Ursus americanus*

E Black Bear
F Ours noir
R Барибал
Американский черный медведь
S Oso negro
D Baribal
Schwarzbär
I Orso nero

*Ursus arctos*

E Brown Bear
Grizzly
F Ours brun
R Бурый медведь
S Oso pardo
D Braunbär
I Orso bruno

Family: Viverridae

*Genetta* spp.

E Genets
F Genettes
R Генеты
S Ginetas
D Genettekatzen
Ginsterkatzen
I Genette

*Viverra civetta*

E African Civet
F Civette d'Afrique
R Африканская цивета
S Civeta africana
D Afrika-Zibetkatze
I Zibetto africano

*Viverra megaspila*

E Large-spotted Civet
F Civette à grandes taches
R Крупнопятнистая цивета «Маяайская вивера»
S Civeta a grandes manchas
D Grossfleck-Zibetkatze
I Viverra dalle grandi macchie

*Viverra tangalunga*

E Tangalunga
F Civette tangalunga
R Тангалунга «Островная вивера»
S Civeta tangalunga
D Kleinfleckzibetkatze
Tangalunga
I Civette malese
Viverra tangalunga

*Viverra zibetha*

E Large Indian Civet "Chinese Bush Cat"
"Civet Cat"
"Genet Cat"
F Grande civette de l'Inde
R Большая цивета
Индийская цивета
S Gran civeta de la India
D Indien-Zibetkatze "Serval"
I Zibetto indiano

# Taxonomic List



| | | |
|---|---|---|
| *Viverricula indica* | E Lesser Civet<br>Small Indian Civet<br>F Civette de l'Inde<br>R Малая цивета<br>S Civeta chica de la India<br>D Kleine Zibetkatze<br>I Viverricola | "Rasse" |

Order: PINNIPEDIA

Family: Otariidae

| | | |
|---|---|---|
| *Arctocephalus australis* | E South American Fur Seal | "Fur Seals"<br>"Loutres"<br>"Cape Horn Fur Seal"<br>"Lobos Fur Seal"<br>"Uruguay Fur Seal" |
| | F Otarie à fourrure australe<br>R Южноамериканский морской котик<br>S Lobo de dos pelos<br>Lobo fino<br>Lobo marino<br>Oso marino<br>Otario | |
| | D Südamerikanischer Seebär | "Lakoda" (see also *A. pusillus)*<br>"Lobos-Seal" |
| | I Lontra del Capo<br>Lontra dell'Uruguay<br>Orso marino sudamericano | |
| *Arctocephalus forsteri* | E New Zealand Fur Seal<br>F Otarie à fourrure d'Australie<br>R Новозеландский морской котик<br>S Otario de Nueva Zelandia<br>D Australischer Seebär<br>I Arctocefalo dell'Australia | |
| *Arctocephalus gazella* | E Kerguelen Fur Seal<br>F Otarie de Kerguelen<br>R Кергеленский морской котик<br>S Lobo marino grácil<br>Otario de Kerguelen<br>D Kerguelen-Seebär<br>I Orso marino kerguelenese | |
| *Arctocephalus pusillus* | E South African Fur Seal | "Cape Fur Seal"<br>"Transveldt Fur Seal" |
| | F Otarie à fourrure d'Afrique du Sud<br>R Южноафриканский морской котик<br>Капский морской котик<br>S Lobo fino de America del sur | |
| | D Südafrikanischer Seebär<br>Zwergseebär | "Kapseal"<br>"Lakoda" (see also *A. australis*)<br>"Lakunene" |
| | I Arctocefalo del Sud-Africa | |

| | | |
|---|---|---|
| *Callorhinus ursinus* | E Northern Fur Seal | "Alaska Fur Seal"<br>"Japanese Fur Seal"<br>"Lakoda"<br>"Victoria Fur Seal" |
| | F Otarie à fourrure du Nord | |
| | R Северный морской котик | «Котик» |
| | S Lobo fino del Norte<br>Oso marino árctico | |
| | D Nördlicher Seebär | "Alaska-Seal"<br>"Lakoda" |
| | I Callorino dell'Alaska<br>Orso marino artico | |
| *Eumetopias jubatus* | E Steller's Sea Lion | "Otter Seal" (juvenile) |
| | F Otarie de Steller | |
| | R Морской лев<br>Сивуч | |
| | S León marino árctico<br>Otario de Steller | |
| | D Stellers Seelöwe | |
| | I Eumetopia di Steller<br>Leone marino artico | |
| *Otaria flavescens*<br>*(= byronia)* | E South American Sea Lion | "Rock Seal" |
| | F Otarie à crinière d'Amerique du Sud | |
| | R Южный морской лев | «Южный сивуч» |
| | S Léon marino del sur<br>Lobo chusco<br>Lobo marino de un pelo<br>Lobo peluca (male)<br>Otario de crin<br>Baya (female) | |
| | D Mähnenrobbe | "Rockseal" (juvenile) |
| | I Leone marino della Patagonia | |
| Family: Phocidae | | |
| *Cystophora oristata* | E Hooded Seal | "Blue Back" (juvenile) |
| | F Phoque à capuchon | |
| | R Хохлач | |
| | S Foca de casso | |
| | D Klappmütze | "Blaumann" (juvenile)<br>"Blaurücken" (juvenile) |
| | I Cistofora crestata<br>Lontra dal beretto | |
| *Halichoerus grypus* | E Grey Seal<br>Horsehead Seal | "Whitecoat" (juvenile) |
| | F Phoque gris<br>Tête de cheval | |
| | R Серый тюлень<br>Длинномордый тюлень | «Тевяк» |
| | S Foca gris | |
| | D Grauseal<br>Kegelrobbe | |
| | I Alichero grigio | |

# Taxonomic List



| | | |
|---|---|---|
| *Pagophilus groenlandicus* | E Saddleback<br>Harp Seal | "Beater"<br>"Bedlamer"<br>"Greenland Star Seal"<br>"Harp Seal"<br>"Middling"<br>"Saddler"<br>"Whitecoat" (juvenile) |
| | F Phoque du Groenland | |
| | R Гренландский тюлень<br>Лысун | |
| | S Foca de Groenlandia<br>Foca pía | |
| | D Grönlandrobbe<br>Sattelrobbe | "Neufundländer" |
| | I Foca dalla sella<br>Foca di Groenlandia | |
| *Phoca (Pusa) hispida* | E Marbel Seal<br>Ringed Seal | "Ring Seal"<br>"Whitecoat" (juvenile) |
| | F Phoque annelé<br>Phoque marbré | |
| | R Кольчатая нерпа | «Кольчатыи тюлень» |
| | S Foca de anillos<br>Foca fétida | |
| | D Eismeer-Ringelrobbe | "Grönländer"<br>"Ring-Seal" |
| | I Foca dagli anelli | |
| *Phoca vitulina* | E Common Seal | "Hair Seal"<br>"Ranger" |
| | F Phoque chien de mer | |
| | R Пятнистый тюлень<br>Обыкновенный тюлень | |
| | S Foca común<br>Vaca marina | |
| | D Seehund | |
| | I Foca comune<br>Foca vitellina | |

Order: HYRACOIDEA

Family: Procaviidae

| | | |
|---|---|---|
| *Procavia capensis* | E Rock Dassie | "Dassie"<br>"Hyrax"<br>"Rock Badger" |
| | F Daman de rocher du Cap | |
| | R Капский Даман | |
| | S Damán del Cabo | |
| | D Kap-Klippschliefer | "Klippdachs" |
| | I Daman del Capo | |

Order: ARTIODACTYLA

Family: Camelidae

| | |
|---|---|
| *Lama glama* | E Llama |
| | F Lama |
| | R Лама |
| | S Llama |
| | D Lama |
| | I Lama |

| | | |
|---|---|---|
| *Lama guanicoe* | E Guanaco | |
| | F Guanaco | |
| | R Гуанако | |
| | S Guanaco | |
| | D Guanako | "Guanaquito" |
| | I Guanaco | |
| *Lama pacos* | E Alpaca | |
| | F Alpaga | |
| | R Альпака | |
| | S Alpaca | |
| | D Alpaka | |
| | I Alpaca | |
| *Vicugna vicugna* | E Vicugna<br>Vicuna | |
| | F Vigogne | |
| | R Викунья | |
| | S Vicuña | |
| | D Vikunja | |
| | I Vigogna | |

Family: Cervidae

| | | |
|---|---|---|
| *Rangifer tarandus* | E Caribou<br>Reindeer | |
| | F Caribou<br>Renne | |
| | R Дикий северный олень<br>Северный олень | |
| | S Reno | |
| | D Karibu<br>Ren | "Pijiki" (Renkalb) |
| | I Renna | |

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# General Notes

During the second half of the 19th century about two million colobus skins were exported from Africa and processed into capes and wall hangings. Due to legal protection by a number of countries of origin, trade became very much reduced, and since CITES has become effective the export of colobus skins has ceased almost completely.

Also some of the guenon species *(Cercopithecus* spp.) used to be in trade in larger quantities, but today only individual skins are exported by tourists. Other primate species have never been used by the fur trade or in very small quantities only.

| Species | 1979 | 1980 | 1981 | 1982 | 1983 | Main exporting countries |
|---|---|---|---|---|---|---|
| Colobus sp. | 500 | 2 | 28 | 1 | 0 | pre-convention |
| Colobus angolensis | 0 | 0 | 3 | 1 | 0 | Kenya |
| Colobus guereza | 62 | 177 | 30 | 93 | 75 | mainly pre-convention |
| Colobus polykomos | 81 | 993 | 695 | 240 | 291 | Ghana, pre-convention |
| Colobus rufomitratus | 3 | 0 | 0 | 0 | 0 | Kenya |
| Total | 646 | 1'172 | 756 | 335 | 366 | |

In most primate species the fur is not very dense, and the underfur is weakly developed or completely. absent. All commercially exploited species have a long tail which is rather sparsely covered with long (some colobus species) or short hairs. The colobus have either a mantle of long hair around the back or elongated hairs on the shoulders.

The following species are illustrated in this section:

| | |
|---|---|
| F-106.008.002.006 | Cercopithecus diana |
| F-106.008.002.009 | Cercopithecus hamlyni |
| F-106.008.002.011 | Cercopithecus mitis albogularis |
| F-106.008.006.002 | Colobus guereza |
| F-106.008.006.004 | Colobus polykomos/angolensis |

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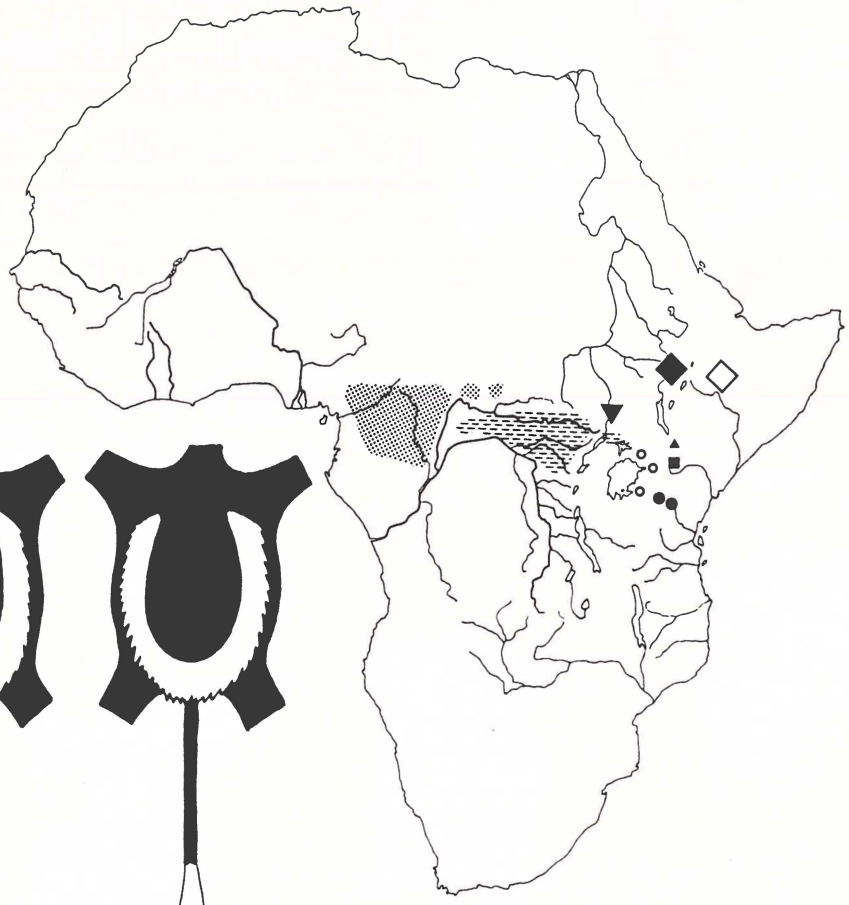
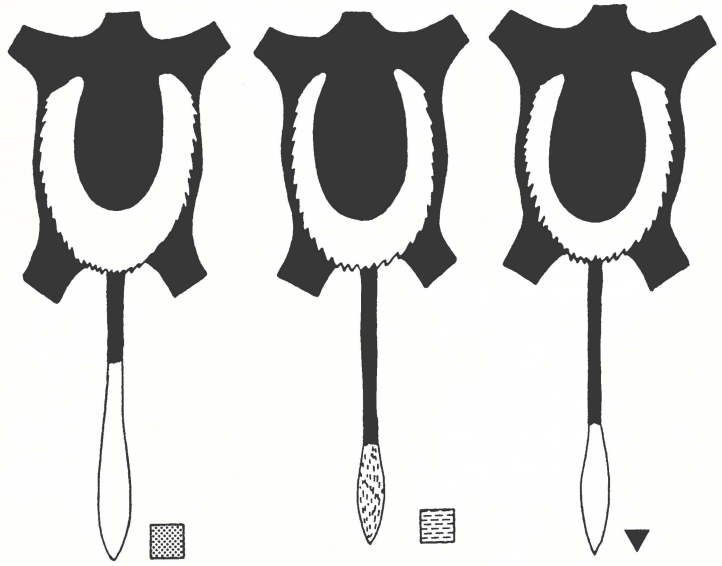
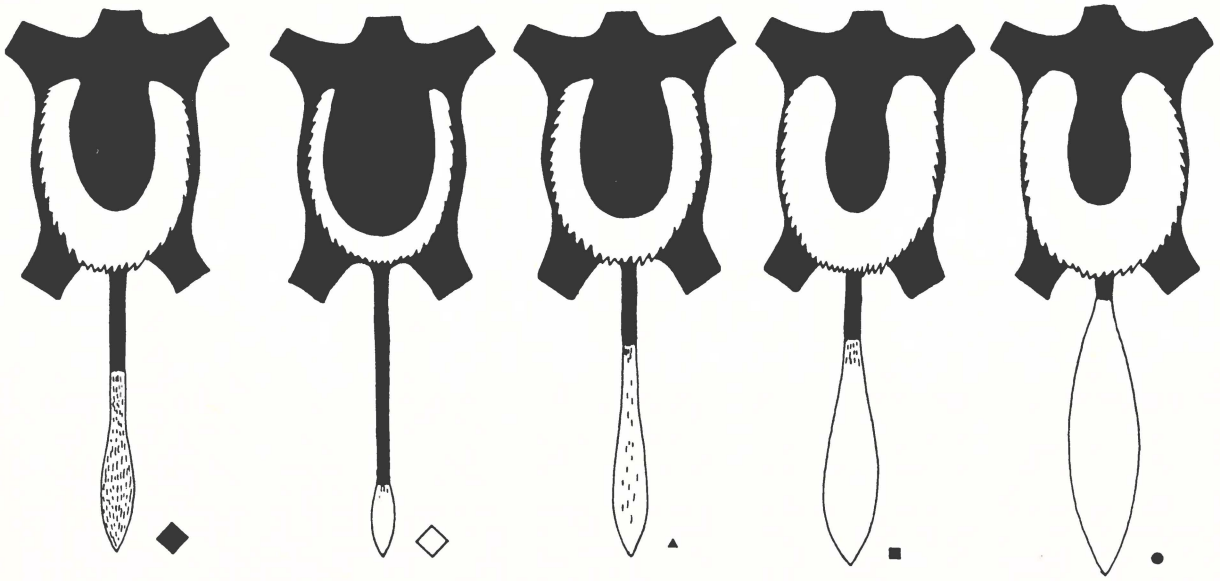
# Identification Aid to Colobus Subspecies

*Colobus guereza*



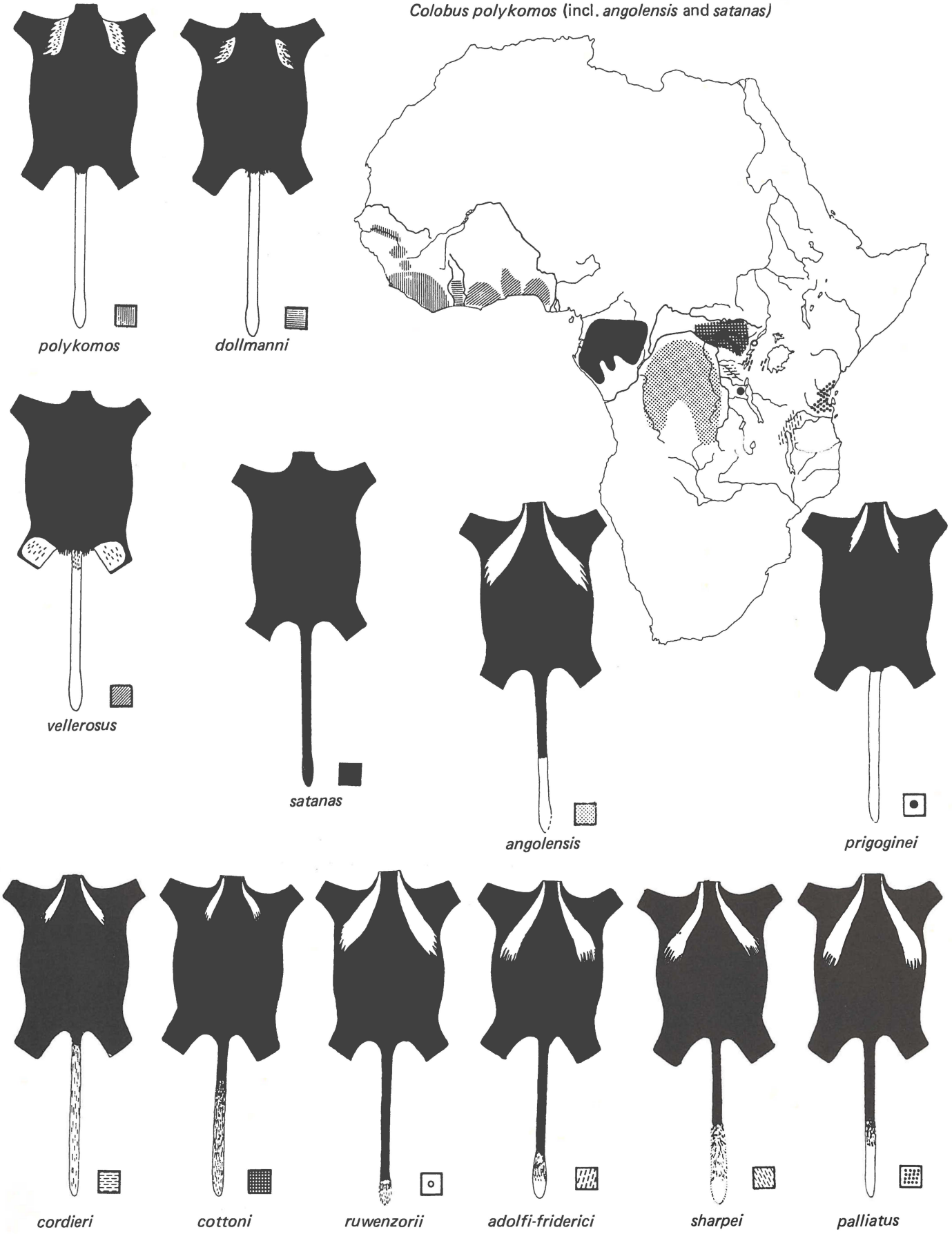


*occidentalis* *uellensis* *dodingae* *matschiei*



*abyssinicus* *gallarum* *percivali* *kikuyensis* *caudatus*

Code F-106.000.000.002
1985 (1)




Maps and drawings: Peter Dollinger, Berne (after Rahm, 1969)
Submitted by the Management Authority of Switzerland

# Cercopithecus diana

(Linnaeus, 1758)

**Common names:**

*Cercopithecus* spp.
(mainly *C. diana):*

E Guenons
Diana Monkey
F Cercopithèques (diana)
R Мартышки
S Cercopitecos
D Meerkatzen (Diana-)
I Cercopiteci

**Trade names:**

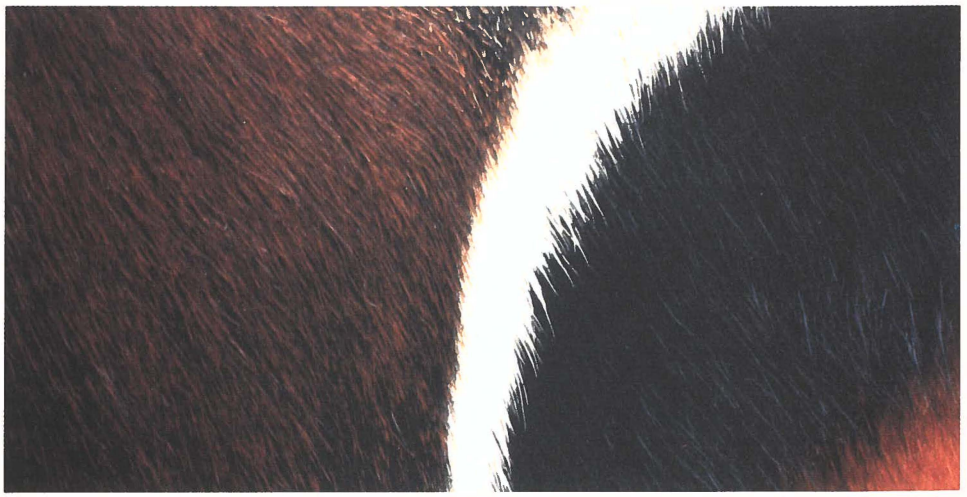
"Grey Monkey"
"Red Monkey" etc.
"Perlaffe"*

**Scientific synonyms:**

includes *roloway*



①



Detail ca. 1 : 1 ②

*= *Cercopithecus diana*

Photos: ① Mickey Bohnacker
② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

Code F-106.008.002.006
1985 (1)

# Cercopithecus hamlyni

Pocock, 1907

**Common names:**

E Hamlyn's Monkey
F Cercopithèque de Hamlyn
D Hamlyn-Meerkatze

see also *C. diana*

**Scientific synonyms:**

none




①



Detail ca. 1 : 1 ②

Photos: ① ② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

Code F-106.008.002.009
1985 (1)

# Cercopithecus mitis albogularis

Booth, 1968

**Common names:**

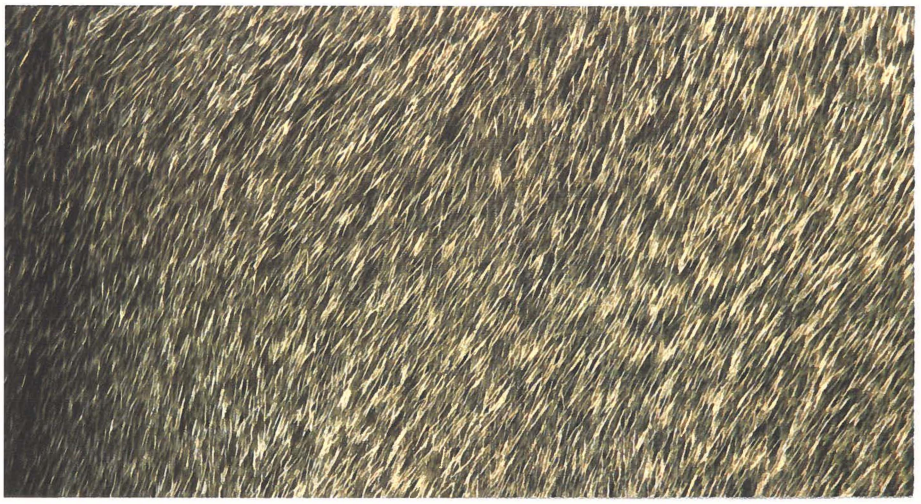
E Syke's Monkey
F Cercopithèque à diadème
D Weisskehlmeerkatze

**Scientific synonyms:**

*Cercopithecus albogularis*



①



Detail ca. 1 : 1 ②

Photos: ① ② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

Code F-106.008.002.011
1985 (1)

# Colobus guereza

Ruppell, 1835

**Common names:**

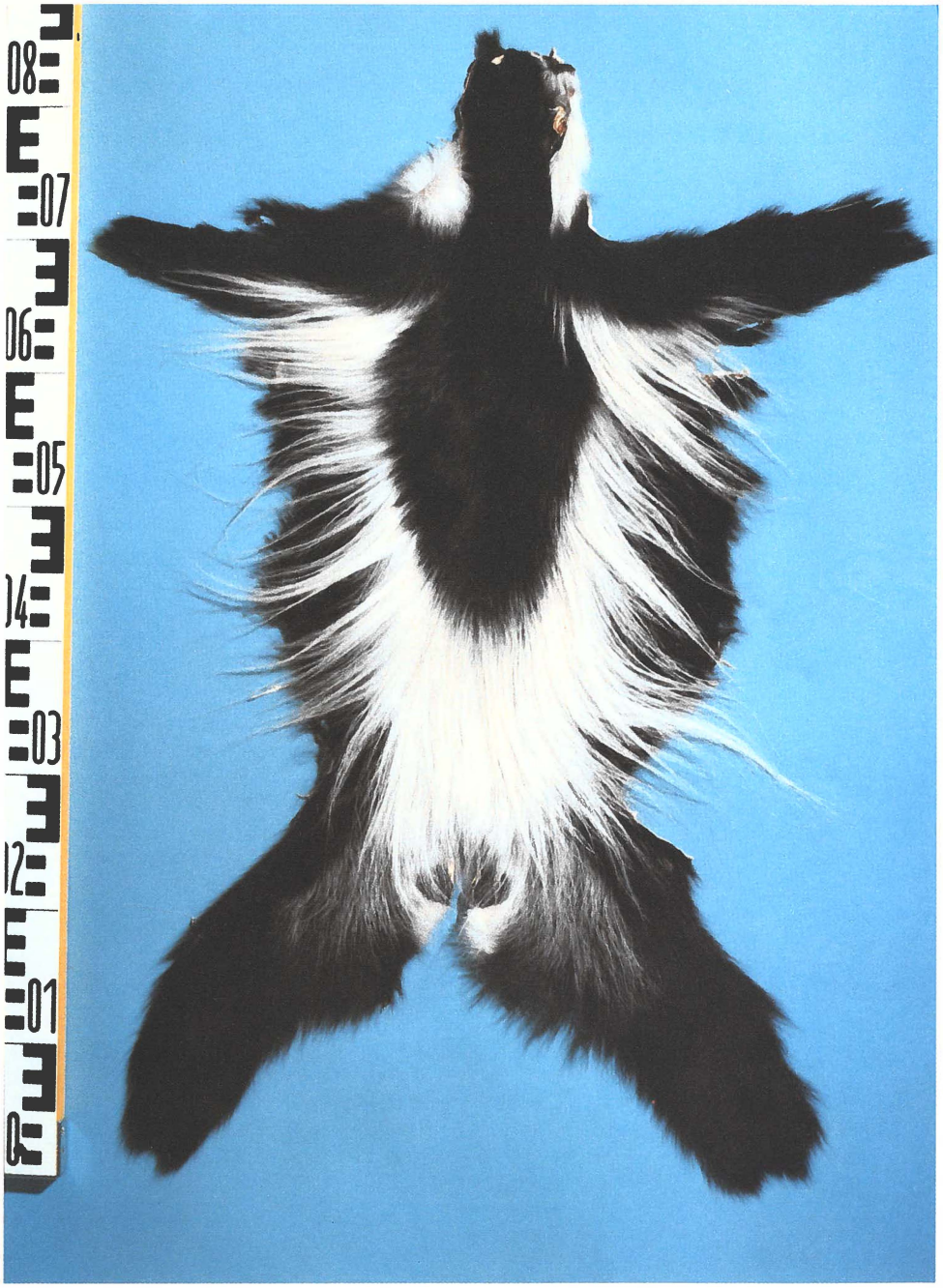
E Black-and-white Colobus
F Colobe guéréza
R Гверепа
S Colobo guereza
D Guereza
I Guereza coda bianca
Guereza d'Abissinia

**Trade names:**

"Abyssinian Monkey"
"Scheitelaffe"

**Scientific synonyms:**

*Colobus abyssinicus*



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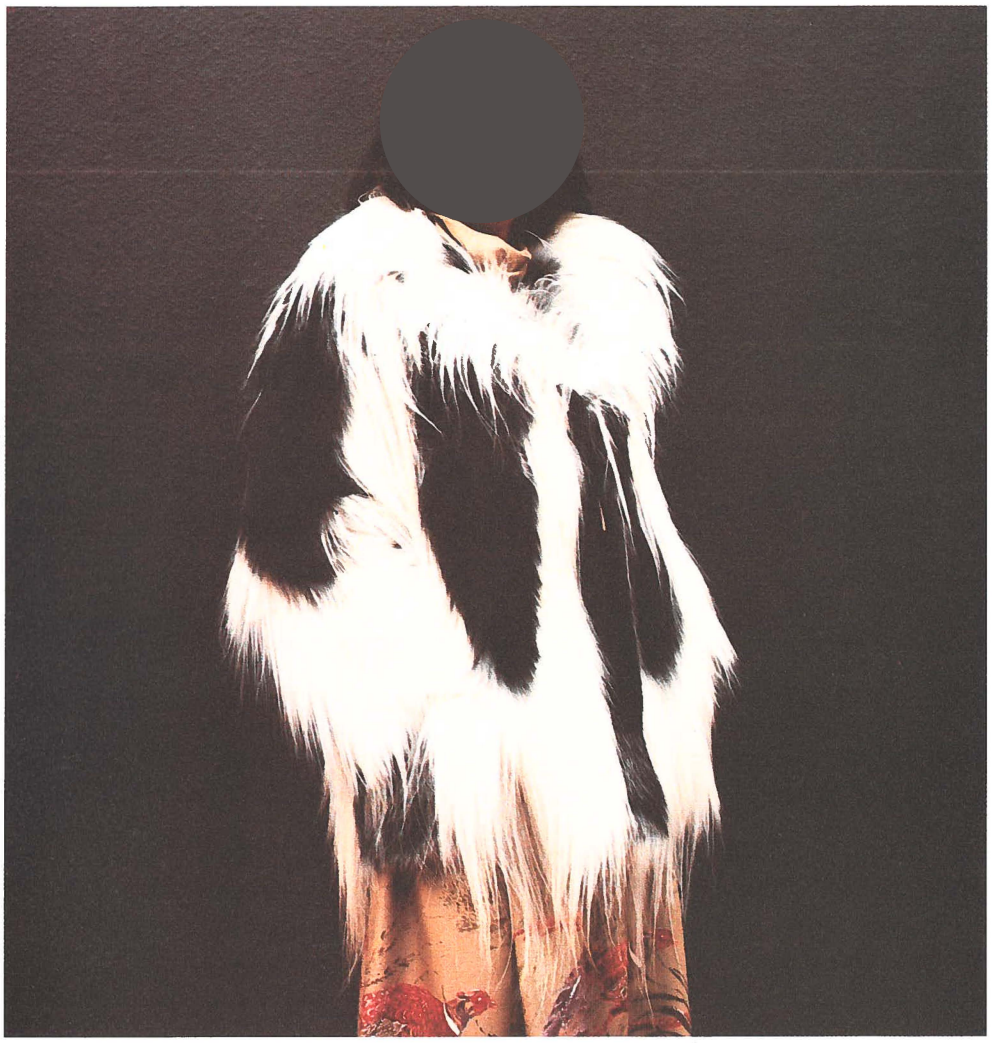


②



③ dyed skins

Photos: ① ② Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Colobus guereza





④ *Colobus guereza caudatus*



⑤ *Colobus guereza kikuyensis*

Photos: ④ ⑤ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

Code F-106.008.006.002
1985 (1)

# Colobus polykomos

(Zimmermann, 1780)

**Common names:**

E (Southern and Western) Black-and-white Colobus
Black Monkey
F Colobe magistrat
R Королевский толстотел
S Colobo abisinio
D Südlicher Guereza
I Guereza dell'Africa occidentale

**Trade names:**

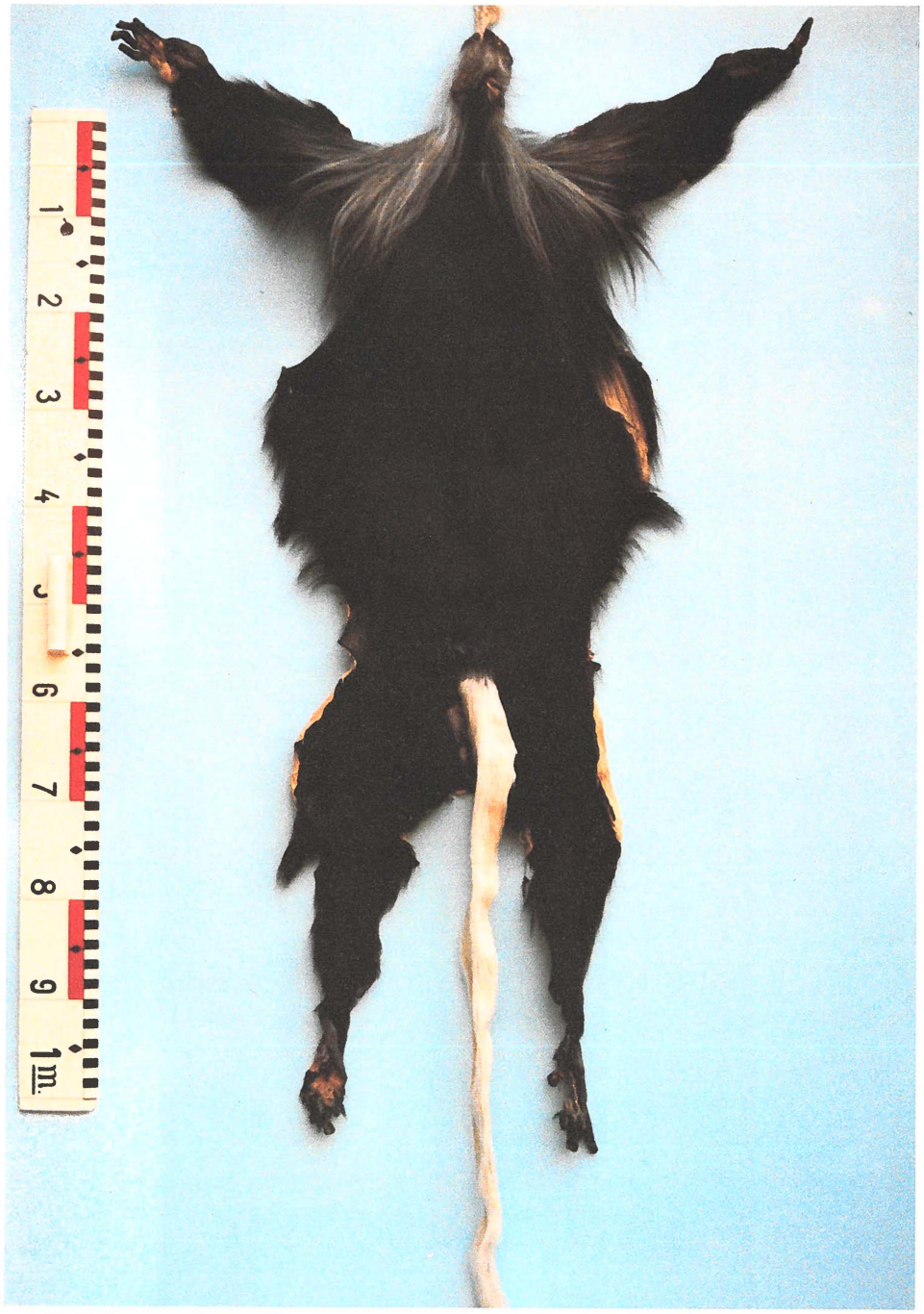
"Scheitelaffe"

**Scientific synonyms:**

*Colobus angolensis*
*Colobus satanas*




① *Colobus polykomos vellerosus*



②

*Colobus polykomos polykomos*

Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Colobus polykomos (= angolensis)





③

*Colobus polykomos adolfi-friderici*

Photo: ③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

Code F-106.008.006.004
1985 (1)

# General Notes

Terrestrial (fissiped) carnivores include the following families:

- Canidae, with 35 living and one recently extinct species;
- Ursidae, with 8 species (including *Ailuropoda melanoleuca)*;
- Procyonidae, with 10 generally recognized (incl. *Ailurus fulgens)* and 9 doubtful species;
- Mustelidae, with about 59 generally recognized living species, one recently extinct species and some doubtful species;
- Viverridae, with about 64 generally recognized and some doubtful species. "Mammal Species of the World" separates the mongooses as family Herpestidae from the viverrids;
- Protelidae, with only one species, the aardwolf;
- Hyaenidae, with 3 species, and
- Felidae, with 34, according to some authors 37 species.

While bear, aardwolf and hyena skins are traded primarily as hunting trophies, many species of the dog, raccoon, marten, civet and cat families play an important role in the fur trade. A very high percentage of carnivore skins originates from captive bred stock, e.g. 20 to 25 million American minks, 2 million polar foxes, about half a million red foxes (including silver fox, platin fox etc.), and more than 100'000 sables per year.

Trapping and hunting wild carnivores still plays an important socio-economic role. In the 1975/1976 season, the North American fur harvest included about 4,8 million carnivore fur skins, worth about 90 million US and 16 million Canadian dollars.

In the past, a considerable number of carnivore species has been overexploited by the fur trade, e.g. the sea otter, *Enhydra lutris,* the giant otter, *Pteronura brasiliensis,* or the leopard, *Panthera pardus,* and two of them, the sea weasel, *Mustela macrodon,* and the Falkland wolf, *Dusicyon australis,* have even become extirpated in the 19th century.

The high demand for spotted cat skins in the late 1960s resulted first in voluntary embargoes imposed by some national fur trade associations (e.g. the German and the Swiss) on the import of leopard, jaguar, snow leopard, clouded leopard, tiger, and giant otter skins, and lead in 1973 to the conclusion of CITES.

Today, species at risk are listed in CITES Appendix I which excludes import for commercial purposes, and legal trade has shifted to less threatened species. Most furbearing species of the Northern Hemisphere are properly managed by national legislation, and it can be assumed that their populations are not negatively affected by the fur trade. If some Eurasian or North American species are threatened or endangered, this is due to other factors, e.g. environmental pollution or transformation of habitat by human activities.

Illegal trade still is important in Latin America *(Lutra* spp., *Pteronura brasiliensis, Felis* spp., *Panthera onca),* Southeast Asia *(Prionodon pardicolor, Felis bengalensis, Panthera pardus),* and – to a lesser extent – Africa *(Panthera pardus, Acinonyx jubatus).* Proper species identification and careful examination of CITES documents may, therefore, be vital for many carnivore species.

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Text: Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland



Code F-112.000.000.001
1983 (1)

# Identification Aid to Carnivore Fur Skins



Carnivore fur skins are, with some experience, readily recognizable as such, although they show an enormous variation in size, fur quality, colour and pattern. The guard hairs always are straight, not undulated as in moles, deer and some bovids, they form in most species a continuous layer which hides the underfur completely. Underfur is always present, but its length and density is subject to specific and climatic variation. A tail is present in all species, and it is always furred. Additional chracteristics, which often miss in commercial skins, are the naked nose pad and the presence of 4 to 5 claws on each foot.

The identification of carnivore families and genera is also relatively easy, but problems may arise at the species level.

The following main types of commercial carnivore fur skins can be distinguished:

**Felidae:**

| | | |
|---|---|---|
| 1 | striped cat type | e.g. *Felis s. silvestris, Panthera tigris*<br>transverse stripes on each side of the back and on the legs, tail evenly thick or slightly tapered, with transverse rings |
| 2 | spotted cat type | e.g. *Felis bengalensis, Felis pardalis, Panthera pardus*<br>spottes or rosettes arranged more or less in longitudinal rows, tail evenly thick or slightly tapered, with transverse rings or with spots |
| 3 | lynx type | e.g. *Felis lynx, Felis rufa*<br>upper side spotted or plain, belly with distinct spots, tail short |

**Viverridae:**

| | | |
|---|---|---|
| 4 | banded civet type | e.g. *Hemigalus derbyanus, Chrotogale owstoni*<br>rather broad transverse bands from one flank to the other, tail very long, bushy, ringed, distal part black |
| 5 | genet type | e.g. *Genetta* spp., *Poiana richardsoni*<br>upper side spotted, belly unspotted, tail extremely long and clearly *(Genetta)* or less clearly *(Poiana)* tapered |
| 6 | civet type | e.g. *Viverra* spp., *Civettictis civetta*<br>lyre pattern on the neck, tail medium, clearly tapered, lower parts of the body and/or legs darker than the sides, dorsal crest |

**Mustelidae:**

| | | |
|---|---|---|
| 7 | skunks type | e.g. *Ictonyx striatus, Mephitis* spp., *Poecilogale albinucha, Conepatus* spp.<br>white pattern on black or dark brown ground, hair rather long, tail bushy, completely or at least at the tip white |
| 8 | otter type | e.g. *Aonyx* spp., *Enhydra lutris, Lutra* spp., *Pteronura brasiliensis*<br>upper parts uniformly brown with a metallic sheen (except in *Enhydra),* tail clearly *(Aonyx, Lutra)* or less clearly *(Enhydra, Pteronura)* tapered |
| 9 | mink type | e.g. *Mustela* spp.<br>skins usually not cut open on the belly, guard hairs rather distant from each other, underfur clearly visible, tail relatively short<br>Martens *(Martes* spp.) are similar but have a longer and bushier tail |
| 11 | badger type | e.g. *Meles meles, Taxidea taxus, Mydaus* spp., *Mellivora capensis*<br>upper parts grizzled, lower parts black, tail short |

**Canidae:**

| | | |
|---|---|---|
| 10 | wolf / fox type | e.g. *Canis* spp., *Dusicyon* spp., *Vulpes* spp.<br>hair long, except in some tropical species, tail bushy with a dorsal scent gland, more or less distinct shoulder cross in most species |
| 11 | raccoon dog type | e.g. *Nyctereutes procyonoides,* some breeds of *Vulpes vulpes*<br>similar to 10, but under parts darker than upper parts |

**Procyonidae:**

| | | |
|---|---|---|
| 12 | raccoon type | e.g. *Procyon* spp., *Bassariscus* spp.<br>body without distinct pattern, tail ringed, bushy, face with a dark mask<br>Lesser panda *(Ailurus fulgens)* with darker under parts, as in 11, without dark face mask |

Code F-112.000.000.003
1983 (1)

# General Notes

Dogs and foxes are very important furbearers. There are many more Canidae skins in trade than e.g. Felidae skins. While all CITES Parties together trade not much more than 300'000 cat skins per year, the United States alone produces annually about one million of fox, wolf and coyote skins.

Two Canidae species are bred on a large scale in captivity: the polar fox *(Alopex lagopus),* world production 2.615 million skins in 1980/81, and the red fox (*Vulpes vulpes)* from which different varieties, such as the silver fox, platin fox, cross fox etc. have been derived.

As dogs are very prolific, their survival is - with a very few exceptions - not threatened by the fur trade. Therefore, only 8 of the 34 species are protected by CITES. Some of the larger species, however, have been greatly reduced by control measures, as they partly feed on domestic sheep, goat, and calves, and as they may cause considerable damage to agriculture.

Dog fur skins can be differentiated from other furs as follows:

- the fur consists of guard hairs and underfur
- monkey furs have no underfur
- the guard hairs form a continuous cover which almost hides the underfur
- in muskrat, mink, some marten, and opossum furs the guard hairs are scattered, and the underfur is clearly visible
- the guard hairs are straight
- the guard hairs of moles, cervids and many bovids are undulated
- the fur also covers the tail
- the tail is naked in muskrat, beaver, coypu, and opossum
- the tail is narrow at its base, bushy in the middle part and pointed at the tip
- the tail is evenly thick from its base to the tip, or only slightly tapered in cats and procyonids
- the tail is heavily tapered in viverrids and most otters
- there is a scent gland on the upper side of the tail
- there is no scent gland on the tail of other carnivores
- the fur is never striped or regularly spotted
- the fur is striped or regularly spotted in most cats and viverrids
- the skin is at least 45 cm long (adults, without tail), commercial skins usually 60 cm and more
- skins from many insectivores, rodents and mustelids are shorter than 45 cm

The quality of furs varies from species to species. The wearing coefficient is relatively high (between 60—70 %) in the wolf and coyote, but rather low in some foxes (30 %). Also other parameters differ greatly. This variation concerns e.g.

- the number of hairs per sq. cm
- the guard hair: underfur hair ratio
- the length of the guard hairs / underfur hairs
- the diameter of the guard hairs / underfur hairs
- the presence/absence of a mane on the neck
- the presence/absence of a ridge along the back

The following table gives an approximate picture of the trade volume of the different Canidae species listed in CITES Appendices. It is based on computer tabulations provided by the Wildlife Trade Monitoring Unit which reflect the number of net exports / net imports, i.e. which avoid double counting of the same skins by neglecting the re-exports.

The table refers to complete raw and tanned skins only. It includes personal and household effects, as well as hunting trophies. Skins "traded" for the purpose of the preparation of this manual have not been considered.

Colour printing of the chapter on Canidae fur skins has been sponsored by the Artenschutzkreis des Kürschnerhandwerks e.V. and the German Fur Trade Federation

Code F-112.001.000.001
1985 (1)

| Species | 1979 | 1980 | 1981 | 1982 | Main exporting countries |
|---|---|---|---|---|---|
| Canis lupus | 4'947+ | 6'273+ | 7'352 + | 4'026 | Canada, USA, USSR |
| Chrysocyon brachyurus | 0 | 0 | 0 | 0 | |
| Cuon alpinus | 0 | 0 | 0 | 0 | |
| Dusicyon culpaeus | 3'120 | 0 | 2'258 | 3'540 | Argentina, Chile |
| Dusicyon griseus | 34'176+ | 67'005 | 133'556 + | 162'399 | Argentina, Chile, Paraguay |
| Speothos venaticus | 0 | 0 | 0 | 0 | |
| Vulpes cana | 0 | 0 | 0 | 0 | |
| Vulpes zerda | 0 | 0 | 0 | 0 | |
| Total | 42'243 | 73'278 | 143'166 | 162'399 | |

The next table clearly shows that unlisted species are much more important in the fur trade than those included in CITES Appendices. It refers to Canidae taken from the wild in the United States:

| Species | 1976/77 | 1977/78 | Total | % | CITES status |
|---|---|---|---|---|---|
| Canis lupus | 1'076 | 864 | 1'940 | 0,1 % | Appendix II |
| Canis latrans | 320'323 | 366'636 | 688'899 | 40,0 % | not listed |
| Alopex lagopus | 4'261 | 4'368 | 8'629 | 0,5 % | " " |
| Urocyon/V.macrotis | 225'277 | 281'347 | 506'624 | 27,2 % | " " |
| Vulpes vulpes | 356'249 | 301'367 | 657'616 | 35,3 % | " " |
| Total | | | 1'863'708 | | |

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Colour printing of this chapter has been sponsored by the Artenschutzkreis des Kürschnerhandwerks e.V. and the Verband der deutschen Rauchwaren- und Pelzindustrie e.V. (German Fur Trade Federation).

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Naturhistorisches Museum Bern, CH-3005 Bern, Switzerland
Zoologisches Museum der Universität, CH-8057 Zürich, Switzerland

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The author wishes to thank all concerned for their valuable contributions.



Text: Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Identification Aid to Canine Fur Skins

| | Size | | | Tail | | | Belly compared with upperparts | | | Legs | | Tip of tail | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | large (> 100 cm) | medium (80-100 cm) | small (<80 cm) | long | medium | short | lighter | same colour | darker | darker than body | as body or lighter | black | white |
| Alopex lagopus | | ● | ● | ● | | | ● | ● | | ● | ● | ● | ● |
| Dusicyon (A.) microtis | | ● | | | ● | | | ● | | ● | | ● | |
| Canis adustus | | ● | | | ● | | ● | | | | ● | | ● |
| Canis aureus | | ● | ● | | ● | | ● | | | | ● | ● | |
| Canis latrans | ● | ● | | | ● | | ● | | | | ● | ● | |
| Canis lupus | ● | | | | ● | | ● | | | | ● | ● | |
| Canis mesomelas | ● | ● | | | ● | | ● | | | | ● | ● | |
| Canis rufus | ● | | | | ● | | ● | | | | ● | ● | |
| Canis simensis | | ● | | | ● | | ● | | | | ● | ● | |
| Cerdocyon thous | | | ● | | ● | | ● | | | ● | | ● | |
| Chrysocyon brachyurus | ● | | | | | ● | | ● | | ● | | | ● |
| Cuon alpinus | ● | ● | | ● | | | ● | | | | ● | ● | |
| Dusicyon culpaeus | ● | ● | | | ● | | ● | | | | ● | ● | |
| Dusicyon griseus | | | ● | | ● | | ● | | | | ● | ● | |
| Dusicyon gymnocercus | | ● | ● | | ● | | ● | | | | ● | ● | |
| Dusicyon sechurae | | | ● | | ● | | ● | | | | ● | ● | |
| Vulpes (F.) zerda | | | ● | ● | | | ● | | | | ● | ● | |
| Dusicyon (L.) vetulus | | | ● | ● | | | ● | | | | ● | ● | |
| Lycaon pictus | ● | ● | | | ● | | ● | | | | ● | | ● |
| Nyctereutes procyonoides | | | ● | | | ● | ● | | | ● | | ● | |
| Otocyon megalotis | | | ● | ● | | | ● | | | ● | | ● | |
| Speothos venaticus | | | ● | | | ● | | | ● | ● | | ● | |
| Urocyon cinereoargentatus | | | ● | ● | | | ● | | | | ● | ● | |
| Urocyon littoralis | | | ● | ● | | | ● | | | | ● | ● | |
| Vulpes bengalensis | | | ● | ● | | | ● | | | | ● | ● | |
| Vulpes cana | | | ● | ● | | | ● | | | ● | | ● | |
| Vulpes chama | | | ● | ● | | | ● | | | | ● | ● | |
| Vulpes corsac | | | ● | | ● | | ● | | | | ● | ● | |
| Vulpes ferrilata | | | ● | ● | | | ● | | | | ● | | ● |
| Vulpes pallida | | | ● | ● | | | ● | | | | ● | ● | |
| Vulpes rueppelli | | | ● | ● | | | ● | | | | ● | | ● |
| Vulpes velox (macrotis) | | | ● | ● | | | ● | | | | ● | ● | |
| Vulpes vulpes | | ● | ● | ● | | | ● | | ● | ● | | | ● |

Note: a) the domestic dog, *Canis lupus f. familiaris,* has not been included
b) other parameters, such as length of guard hairs, thickness of underfur and softness of fur vary considerably within the same species, according to season and origin of the specimens.

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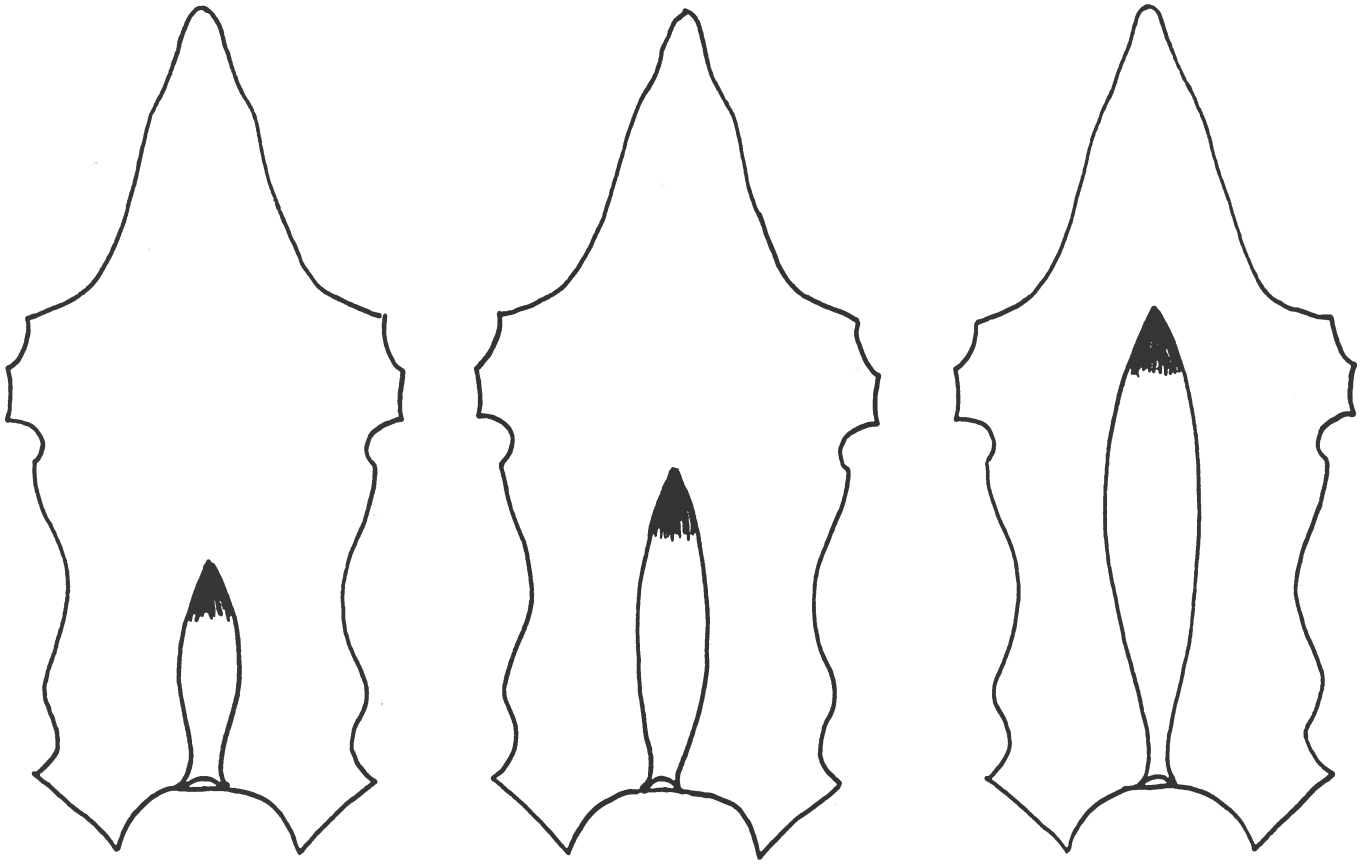
1985 (1)



*short* *medium* *long*

Text and drawings: Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

not listed

# Alopex lagopus

Kaup, 1829

**Common names:**

E Arctic Fox
F Renard polaire
R Песец
S Zorro ártico
Zorro polar
D Eisfuchs
Polarfuchs
I Volpe artica
Volpe polare

**Trade names:**

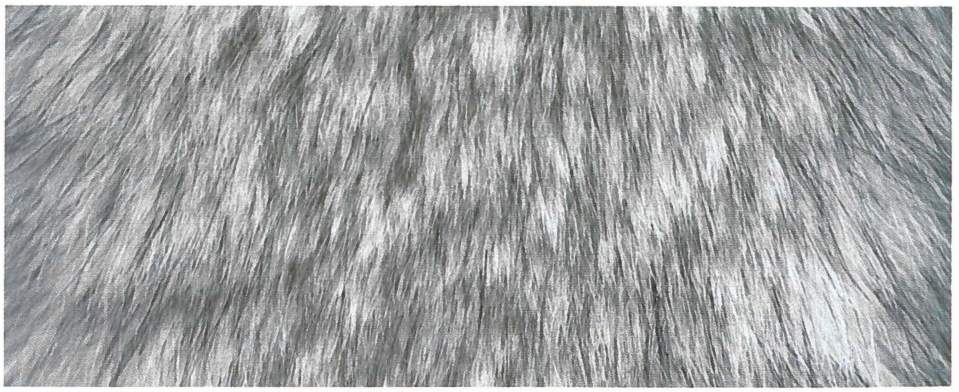
"Blue Fox"
"White Fox"
"Renard blanc"
"Renard bleu"
"Голубой песец"
"Zorro azul"
"Zorro blanco"
"Blaufuchs"
"Weissfuchs"
"Volpe azzurra"
"Volpe bianca"

**Scientific synonyms:**

none relevant



Farmed polar fox
blue phase ①



Detail ca. 1 : 1 ②




③ White phase

Photos: ① ② Peter Dollinger, Berne, ③ Wolf Suter, Basel
Submitted by the Management Authority of Switzerland

not listed

# Canis adustus

Sundevall, 1846

**Common names:**

E Side-striped Jackal
F Chacal à flancs rayés
R Полосатый шакал
S Chacal rayado
D Streifenschakal
I Sciacallo striato

**Trade names:**

"Jackal"
"Chacal"
"Schakal"

**Scientific synonyms:**

none



not listed

# Canis aureus

Linné, 1758

**Common names:**

E Common Jackal
Golden Jackal
F Chacal commun
R Шакал
S Chacal común
Chacal dorado
D Goldschakal
I Sciacallo comune
Sciacallo dorato

**Trade names:**

"Jackal"
"Chacal"
"Schakal"

**Scientific synonyms:**

*Canis lupaster*



①



②

Detail ca. 1 : 1



③

*Canis aureus lupaster*
North African Jackal
Tunisia

Photos: ① ② ③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

not listed

# Canis lupus f. familiaris

(Linné, 1758)

**Common names:**

E Domestic Dog
F Chien domestique
R Собака
Домашняя собака
S Perro domestico
D Haushund
I Cane domestico

**Trade names:**

"Dogskin"
"Goupee"
"Loup de Chine"
"Loup de Mongolie"
"Gae-Wolf"
"Gubi"
"Koreawolf"
"Sobaki"
"Wolf"

**Scientific synonyms:**

*Canis familiaris*
*Canis dingo*
*Canis hallstromi*



①



Detail ca. 1:1 ②



③

Photos: ① ② Peter Dollinger, Berne, ③ by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

not listed

# Canis latrans

Say, 1823

**Common names:**

E Brush Wolf
Coyote
Prairie Wolf
F Coyote
R Койот
S Coyote
Lobo da las estepas
Perro de las praderas
Perro ladrador
D Heulwolf
Kojote
I Coyote
Lupo della prateria

**Trade names:**

Garments traded as "Wolf"

**Scientific synonyms:**

none




①



Detail: ca. 1 : 1 ②



③
Design Ralf Zeitler

Photos: ① ③ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft, ② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Canis lupus

Linnaeus, 1758

**Common names:**

E Gray Wolf
Timber Wolf
F Loup commun
R Волк
S Lobo
D Wolf
I Lupo

**Trade names:**

"Wolf"
"Серый волк"

**Scientific synonyms:**

*Canis lycaon*
*Canis nubilus*
*Canis pallipes*
*Canis hodophilax*
*Canis variabilis*
*Lupus orientalis*
*Lupus laniger*
*Canis chanco*
*Canis niger*
*Canis pambasileus*
*Canis tundrarum*
*Lupus altaicus*
*Lupus tschiliensis*
*Lupus filchneri*
*Lupus karanorensis*



*Canis lupus lupus*
European Wolf ①



*Canis lupus kurjak*
Detail ca. 1 : 1 ②



③

*Canis lupus kurjak*
Bosnian Wolf

| |
|---|
| Populations of Afghanistan, Bhutan, Burma, India, Nepal and Pakistan = Appendix I<br>all other populations = Appendix II |

Photos: ① ③ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Canis lupus





*Canis lupus occidentalis*
dark phase ④

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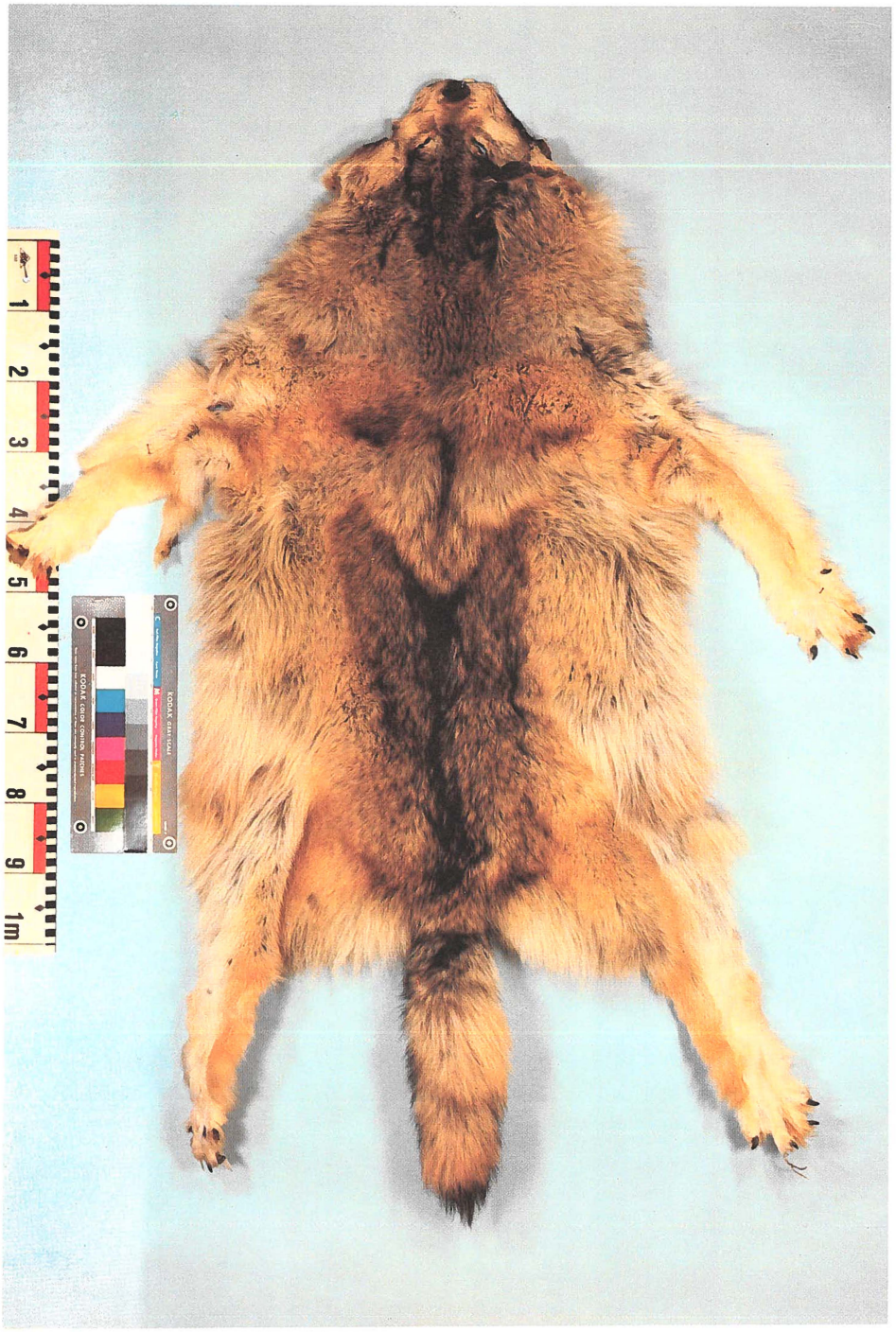


⑤

*Canis lupus occidentalis*
light phase

Photos: ④ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
⑤ Wolf Suter, Basel
Submitted by the Management Authority of Switzerland

# Dusicyon (= Cerdocyon) thous

(Linné, 1766)

**Common names:**

E Crab-eating Fox
Forest Fox
Savanna Fox
F Renard crabier
R Майконя
Лисица майконя
S Aguará
Zorro cangrejero
Zorro carbonero
Zorro de monte
Zorro rojizo
Zorro perro
D Maikong
Waldfuchs
I Volpe sciacallo

**Trade names:**

"Pata negra"

**Scientific synonyms:**

*Cerdocyon thous*



①



Detail ca. 1 : 1 ②

Photos: ① ② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

Code F-112.001.004.001
1985 (1)

# Dusicyon culpaeus

(Molina, 1782)



①



② guard hair plucked

**Common names:**

E Andean Wolf
Colpeo Fox
F Renard colfeo
Colfou
R Андская лисица
S Culpeo
Perro de Patagonia
Zorro andino
Zorro colorado
D Andenschakal
I Volpe di Patagonia

**Trade names:**

"Magellanic Fox"
"Андский щакал"
"Tierra del Fuego"
"Feuerlandfuchs"
"Magellanfuchs"
"Patagonischer Fuchs"



③ Detail ca. 1 : 1

Code F-112.001.007.001
1985 (1)



④

**Scientific synonyms:**

*Dusicyon culpaeolus*

Photos: ① ② ③ ④ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Dusicyon griseus griseus

(Gray, 1837)

**Common names:**

E Argentine Fox
Little Grey Fox
Pampas Fox
F Renard gris de l'Argentine
R Аргентинская лисица
Южноамериканская лисица
S Chilla
Zorro gris
Zorro gris chico
Zorro gris patagónico
D Argentinischer Graufuchs
I Volpe grigia dell'Argentina

**Trade names:**

"Chubut Fox"
"Magellan Fox"
"Mendoza Fox"
"Rio-Chubut Fox"
"Rio-Negro Fox"
"Sta Cruz Fox"

**Scientific synonyms:**

Formerly designated as
*D. azarae* by several authors
*Dusicyon fulvipes*



*Dusicyon griseus griseus*
"Chubut Fox" ①



Detail ca. 1 : 1 ②



③

*Dusicyon griseus griseus*

Photos: ① ② Peter Dolllinger, Berne, ③ by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

# Dusicyon griseus griseus





*Dusicyon griseus griseus*
"Magellan fox" ④



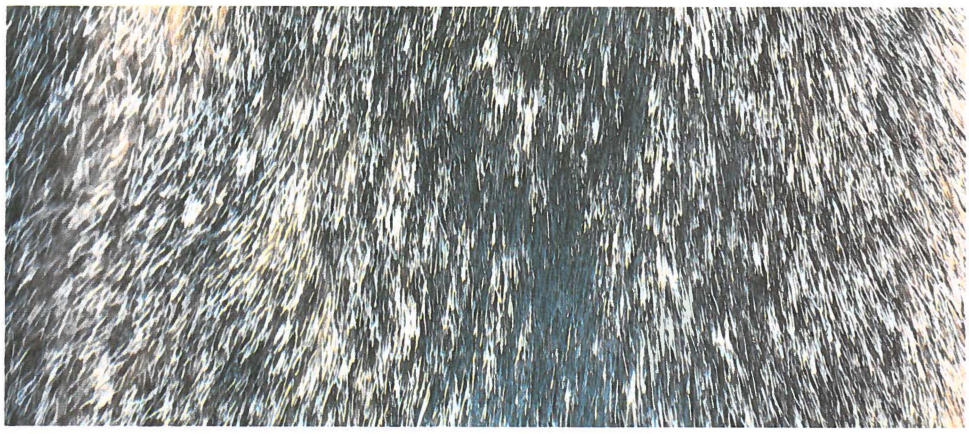
Detail ca. 1 : 1 ⑤

Code F-112.001.007.002a
1985 (1)



⑥

*Dusicyon griseus griseus*
"Santa Cruz fox"



⑦

Detail ca. 1 : 1

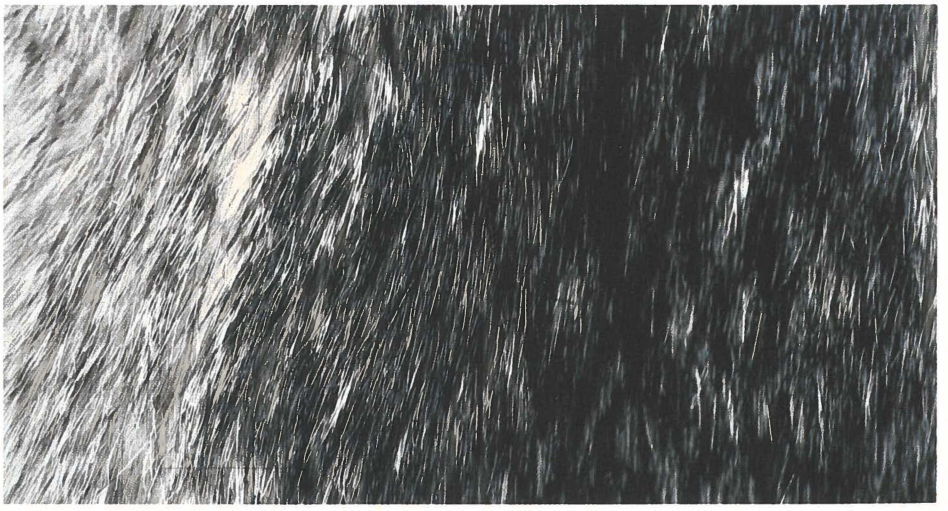
Photos: ④ ⑤ ⑥ ⑦ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Dusicyon griseus gracilis

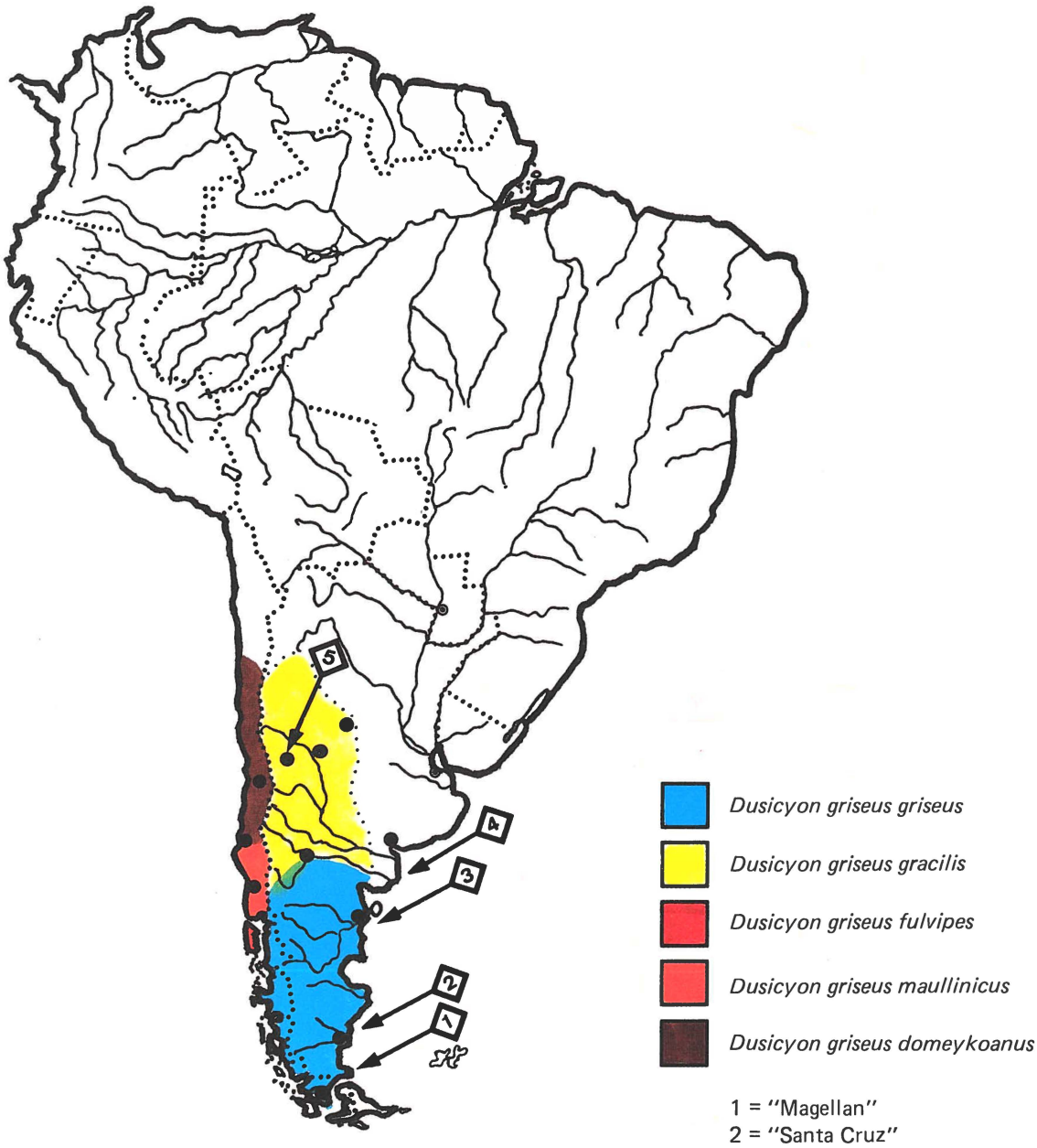
(Burmeister, 1861)



*Dusicyon griseus gracilis*
"Mendoza fox" ①



Detail ca. 1 : 1 ②

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Erlich de Yoffe, A., Crespo, J.A. & Castillo, O. (1984). Los Zorros. Fauna Argentina No. 52.


Photos and map :Peter Dollinger, Berne
Submitted by the Managemnet Authority of Switzerland

# Dusicyon gymnocercus gymnocercus (G. Fischer, 1814)

**Common names:**

E Pampas Fox
Paraguayan Fox
F Renard d'Azara
R Пампаская лисица
Парагваиская лисица
S Aguarachay
Zorro gris (de las pampas)
Zorro pampeano
D Pampasfuchs
I Volpe azara
Volpe sudamericana
Volpe grigia delle Pampas

**Trade names:**

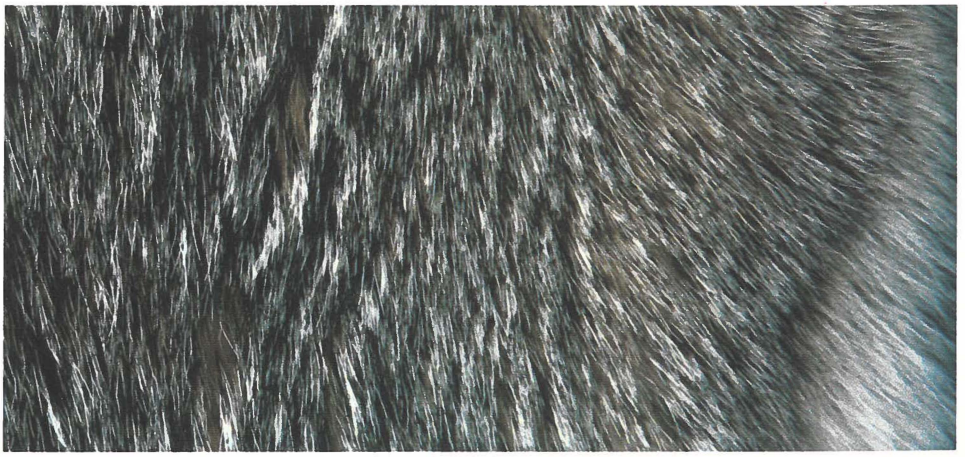
"Pata amarilla"

**Scientific synonyms:**

*Dusicyon azarae*
*Pseudalopex gymnocercus*

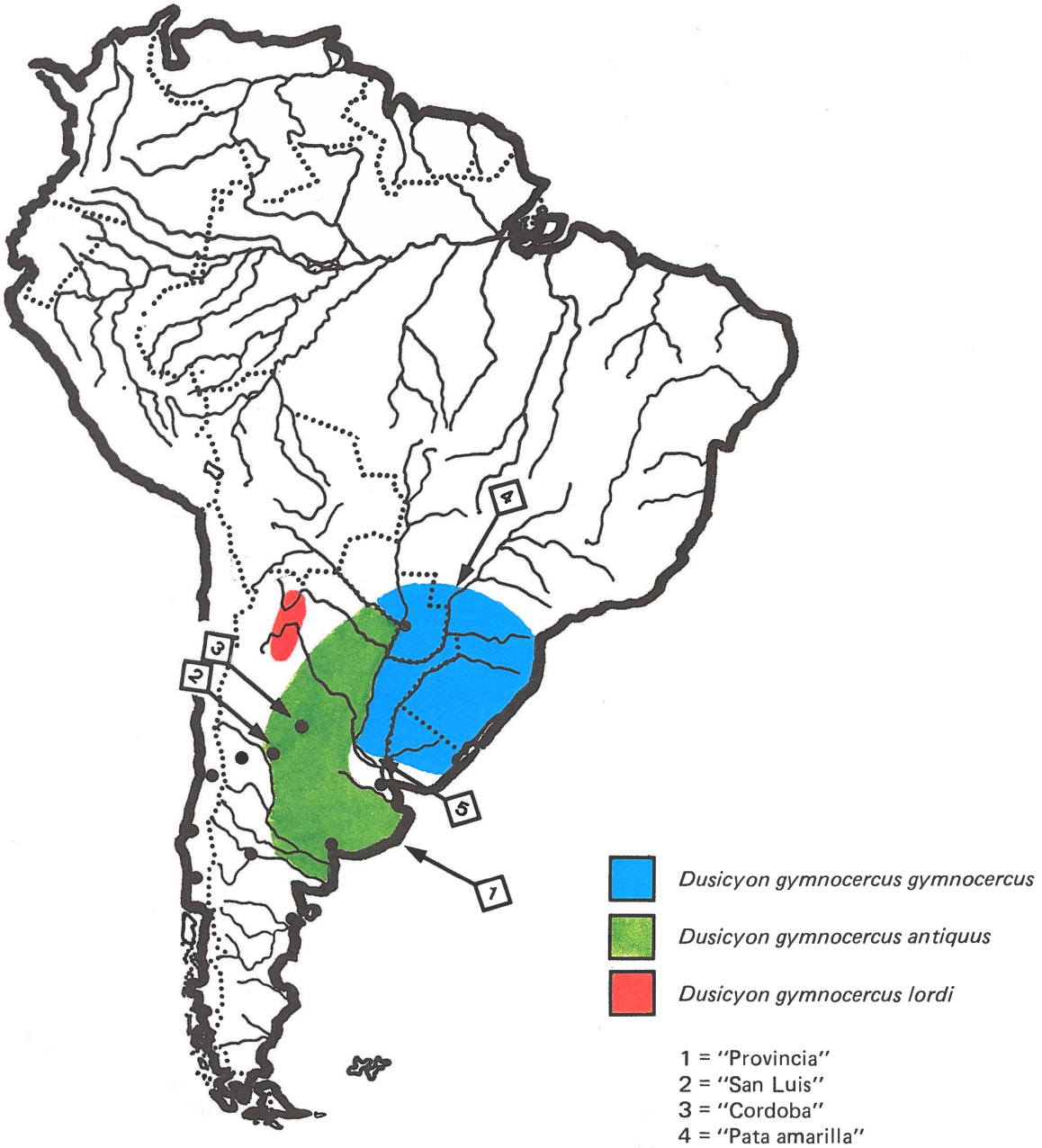


①



②

Detail ca. 1 : 1

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Erlich de Yoffe, A., Crespo, J.A. & Castillo, O. (1984). Los Zorros. Fauna Argentina No. 52.

Massoia, E. (1982). *Dusicyon gymnocercus lordi,* una nueva subespecie del "zorro gris grande". Rev. Neotropica *28* (80): 147–152. La Plata.


Photos and map: Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Dusicyon gymnocercus antiquus (Ameghino, 1889)

**Common names:**

E Pampas Fox
Paraguayan Fox
F Renard' d'Azara
R Пампаская лисица
Парагваиская лисица
S Aguarachay
Zorro gris (de las pampas)
Zorro gris común
Zorro gris grande
Zorro pampeano
D Pampasfuchs
I Volpe azara
Volpe sudamericana
Volpe grigia delle Pampas

**Trade names:**

"Aguarachai"
"Cordoba Fox"
"Entre Rios Fox"
"Pampas Fox"
"Provincia Fox" (designates also *C. thous)*
"San Luis Fox"
"Azarafuchs"
"Zorro del país"

**Scientific synonyms:**

Formerly designated as
*D. azarae* by several authors
*Pseudalopex gymnocercus*

*Dusicyon gymnocercus antiquus*
"Provincia fox"



①





Details ca. 1 : 1 ② ③

Code F-112.001.007.003b
1985 (1)



④ *Dusicyon gymnocercus antiquus*

Photos: ① ② ③ Peter Dollinger, Berne, ④ by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

# Dusicyon gymnocercus antiquus





⑤

*Dusicyon gymnocercus antiquus*
"San Luis fox"



Detail ca. 1 : 1 ⑥

Code F-112.001.007.003b
1985 (1)



⑦

*Dusicyon gymnocercus antiquus*
"Cordoba fox"



⑧ Detail ca. 1 : 1

Photos: ⑤ ⑥ ⑦ ⑧ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Vulpes cana

Blanford, 1877

**Common names:**

E Blanford's Fox
Hoary Fox
F Renard de Blanford
R Афганская лисица
S Zorro de Blanford
D Afghanfuchs
I Volpe di Blanford

**Trade names:**

none




Photo: Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

Code F-112.001.015.002
1985 (1)

not listed

# Vulpes corsac and Vulpes velox

(Linnaeus, 1768/Say, 1823)

*Vulpes corsac*

**Common names:**

E Korsak
F Renard corsac
Renard des steppes
R Корсак
Лисица корсак
S Kirsa
Zorro corsak
D Korsak
Korsuk
Steppenfuchs
I Volpe corsac
Volpe delle steppe

**Trade names:**

"Asiatischer Kitfuchs"
"Mongolischer Kitfuchs"

*Vulpes velox*

**Common names:**

E Kit Fox
Swift Fox
F Renard kit
Renard véloce
R Американский корсак
Проворная лисица
S Zorro enano americano
Zorro orejudo
Zorro veloz
D Grossohr-Kitfuchs
Swiftfuchs
I Volpe kit
Volpe veloce

**Trade names:**

"Kitt Fox"
"Быстроногая лисица"
"Kitfuchs"
"Swiftfuchs"

**Scientific synonyms:**

*Vulpes macrotis*




①

left: *Vulpes corsac*
right: *Vulpes velox*
red phase



*Vulpes velox*, red phase
Detail ca. 1 : 1 ②

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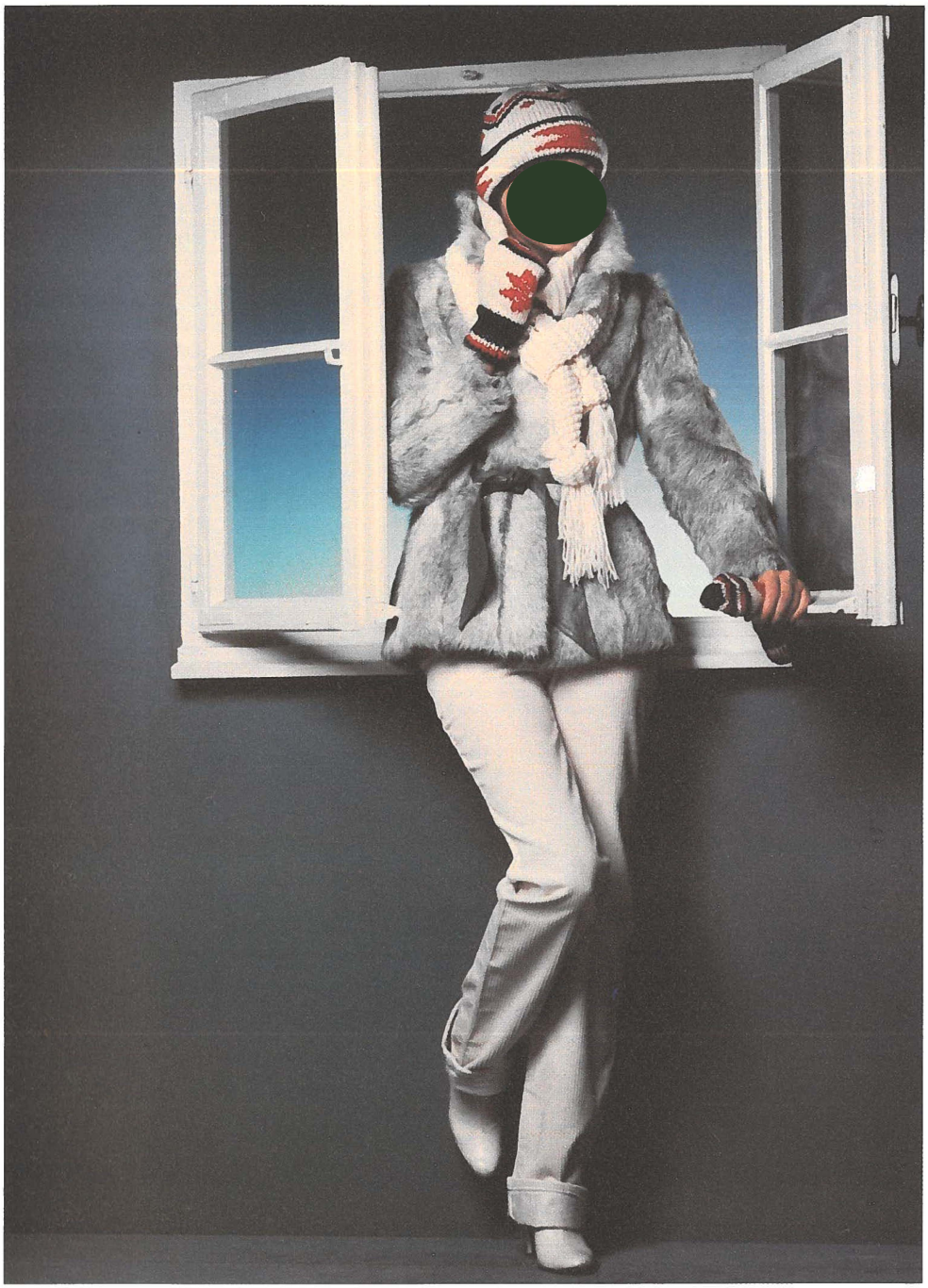
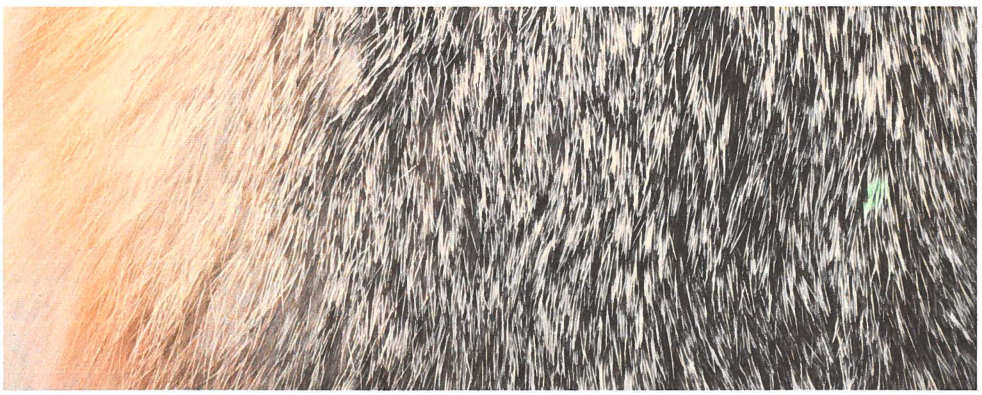
F-112.001.015.009
1985 (1)



③
*Vulpes velox*
grey phase



④
*Vulpes velox,* grey phase
Detail ca. 1 : 1

Photos: ① Mickey Bohnacker, ② ④ Peter Dollinger, Berne, ③ by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

not listed

# Vulpes vulpes

(Linné, 1758)

**Common names:**

E Red Fox
F Renard rouge
Renard roux
R Лисица
Красная лиса
S Zorro común
Zorro rojo
D Rotfuchs
I Volpe rossa

**Trade names:**

"Лиса"
"Рыжая лисица"
"Birkfuchs"
"Brandfuchs"
"Kohlfuchs"

**Scientific synonyms:**

*Vulpes fulva*



SW Asian red fox
(basic colour grey!) ①



Detail ca. 1 : 1 ②



③ Australian red fox

Variations/Farm breed

E "Platinum Fox"
F "Renard platiné"
R "Платиновая лисица"
S "Zorro platino"
D "Platinfuchs"
I "Volpe platinata"

E "Silver Fox"
F "Renard argenté"
R Уернобурая лисица"
"Серебристая лисица"
S "Zorro plateado"
D "Silberfuchs"
I "Volpe argentata"

E "Cross Fox"
F "Renard croisé"
R "Крестовка"
"Лисица крестовка"
"Сиводушка"
S "Zorro cruzado"
D "Kreuzfuchs"
I "Volpe incrociata"

E "Glacier Blue Fox"
"Patch Fox"
"Pearl Platin Fox"
"Snow Fox"
"Whiteface Fox" etc.
R "Снежная лиса"
"Белая лиса"
"Трехцветная лиса"

Photos: ① ② ④ Peter Dollinger, Berne, ③ by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
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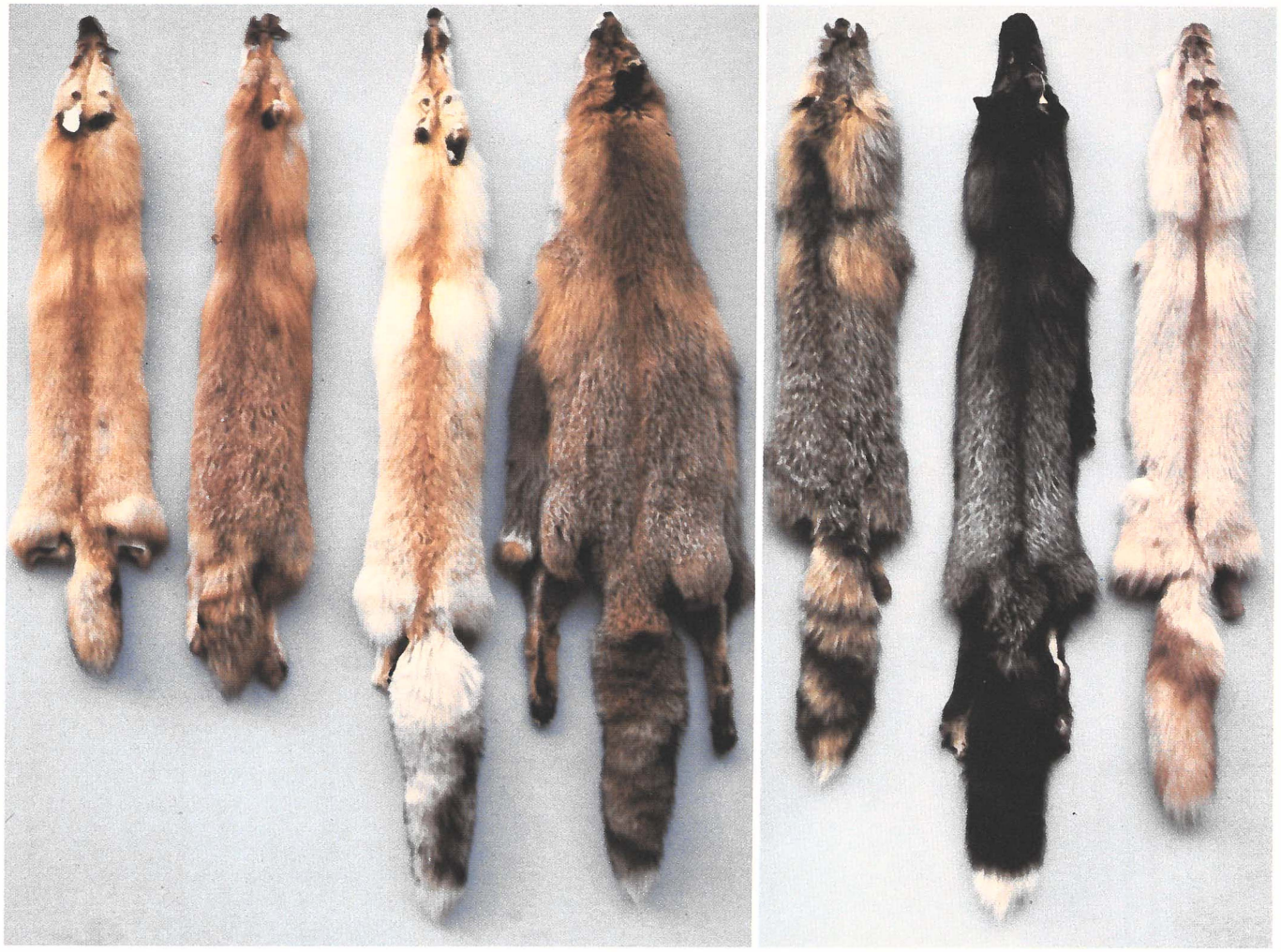
# Vulpes vulpes





④ a b c d e f g




4a *Vulpes vulpes fulva*
North America

4b *Vulpes vulpes beringiana*
USSR (Kamtchatka)

4c *Vulpes vulpes karagan*
Mongolia

4d *Vulpes vulpes crucigera*
Switzerland

4e Cross fox

4f Silver fox (captive bred)

4g Amber fox (captive bred)

Code F-112.001.015.010
1985 (1)

# General Notes

Otters (Lutrinae) provide a high quality fur which is extremely durable (wearing coefficient 90–100 %), and which is mainly used for the manufacture of garments and hats.

Otter fur skins can be differentiated from other furs as follows:

- the fur consists of guard hairs and underfur
- monkey furs have no underfur
- the guard hairs form a continuous cover which almost hides the underfur
- in muskrat, mink, some marten, and opossum furs the guard hairs are scattered, and the underfur is clearly visible
- the guard hairs are straight
- the guard hairs of moles, cervids and many bovids are undulated
- the fur also covers the tail
- the tail is naked in muskrat, beaver, coypu, and opossum
- the tail is broad at its base and tapering towards the tip
- the tail is narrow at its base, bushy in the middle part and pointed at the tip in foxes, wolves and other dogs
- the tail is evenly thick from its base to the tip, or only slightly tapered in most other Carnivores (except some viverrids)
- there is no scent gland on the upper side of the tail
- there is a scent gland on the tail of foxes, wolves and other dogs
- the belly has the same colour or is lighter than the back
- the back is lighter than the belly in badgers and in the raccoon dog
- the basic colour of the fur is plain brown apart from some white or yellowish spots on neck, chest and belly there are no markings
- beaver, coypu, muskrat, mink and sable are similar in colour
- in most other carnivores the basic colour of the fur is not brown
- the fur of most other carnivores shows markings, such as spots, stripes, shoulder cross, black feet etc.
- the skin is at least 45 cm long (adults, without tail)
- skins from many insectivores, rodents and mustlids are shorter than 45 cm

Especially finished coypu skins ("Otter-Nutria") may look very similar to *Lutra* pelts. The long-furred *Enhydra* pelt is somewhat beaver-like. When manufactured into garments, *Pteronura* pelts may be confused with shorn fur seal skin. In Canadian otters sometimes the guard hairs are plucked which gives them a fur seal-like appearance. Otherwise otter pelts are readily identifiable as such.

Within the otter subfamily the genera can be identified as follows:

- *Aonyx* — Usually not in trade. Fur very flat. Guard hairs 9–14 mm, underfur 5–9 mm.
- *Enhydra* — Pelt thick, silky and velvety. Guard hairs very long (34–36 mm), often tipped white, underfur long (19–20 mm) and dense. Tail only slightly tapered.
- *Lutra* — Pelt with metallic shine, velvety to coarse according to species and origin. Rather flat in tropical forms, thick in species originating from temperate regions. Guard hairs short to medium (12–20 mm) underfur short to medium (6–12 mm).
- *Pteronura* — Extremely large. Pelt velvety, very flat. Guard hairs short (8 mm), underfur virtually absent. Tail usually cut off behind the proximal third.

Some of the tropical otter species and the sea otter have been overexploited by the fur trade. The sea otter populations have recovered but still enjoy far-reaching protection. The Eurasian otter *(Lutra lutra)* has lost most of its habitat in Europe because of human activities and environmental pollution. Therefore, most of the commercially relevant species are listed in CITES Appendix I, and the fur trade concentrates, more and more, on the Canadian otter *(Lutra canadensis)* of which about 30'000 are taken per year.

The following data on trade in complete raw or tanned skins have been provided by WTMU Cambridge:

| Species | 1979 | 1980 | 1981 | 1982 | 1983 | Main exporting countries |
|---|---|---|---|---|---|---|
| Lutrinae/Lutra spp. | 1.666 | 126 | 143 | 27 | 0 | Paraguay, Colombia |
| Aonyx capensis | 0 | 0 | 0 | 0 | 43 | Nigeria |
| Aonyx cinerea | 8 | 0 | 0 | 0 | 0 | Thailand |
| Enhydra lutris | 1 | 32 | 1 | 0 | 0 | Canada |
| Lutra canadensis | 7.246 | 16.806 | 21.146 | 10.206 | 14.896 | USA, Canada |
| Lutra longicaudis | 23.839 | 37.444 | 19.925 | 5.081 | 527 | Paraguay, Panama, Peru, Honduras |
| Lutra lutra | 200 | 12 | 500 | 0 | 0 | PR China, Norway |
| Lutra maculicollis | 1 | 0 | 0 | 0 | 0 | South Africa |
| Lutra perspicillata | 1.976 | 3.558 | 210 | 427 | 1.100 | Bangladesh, India |
| Lutra sumatrana | 329 | 0 | 0 | 0 | 0 | |
| Pteronura brasiliensis | 0 | 1 | 1.007 | 1 | 0 | Paraguay |
| | 35.266 | 57.979 | 42.932 | 15.742 | 16.566 | |

**Bibliography:**


Deems, E.F. Jr. & Pursley, D. (eds). (1978). North American Furbearers. College Park, Maryland.

Kroll, J. & Franke, F. (1976). Jury Fränkel's Rauchwarenhandbuch. Murrhardt.

Melquist, W.E. (1984). Status Survey of Otters (Lutrinae) and Spotted Cats (Felidae) in Latin America. IUCN Report No. 9006. Gland.



Text: Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Aonyx capensis

(Schinz, 1821)

**Common names:**

E Cape Clawless Otter
F Loutre à joues blanches
R Калская выдра
S Nutria africana
D Kapotter
Weisswangenotter
I Aonice capensi
Lontra dalle guance bianche

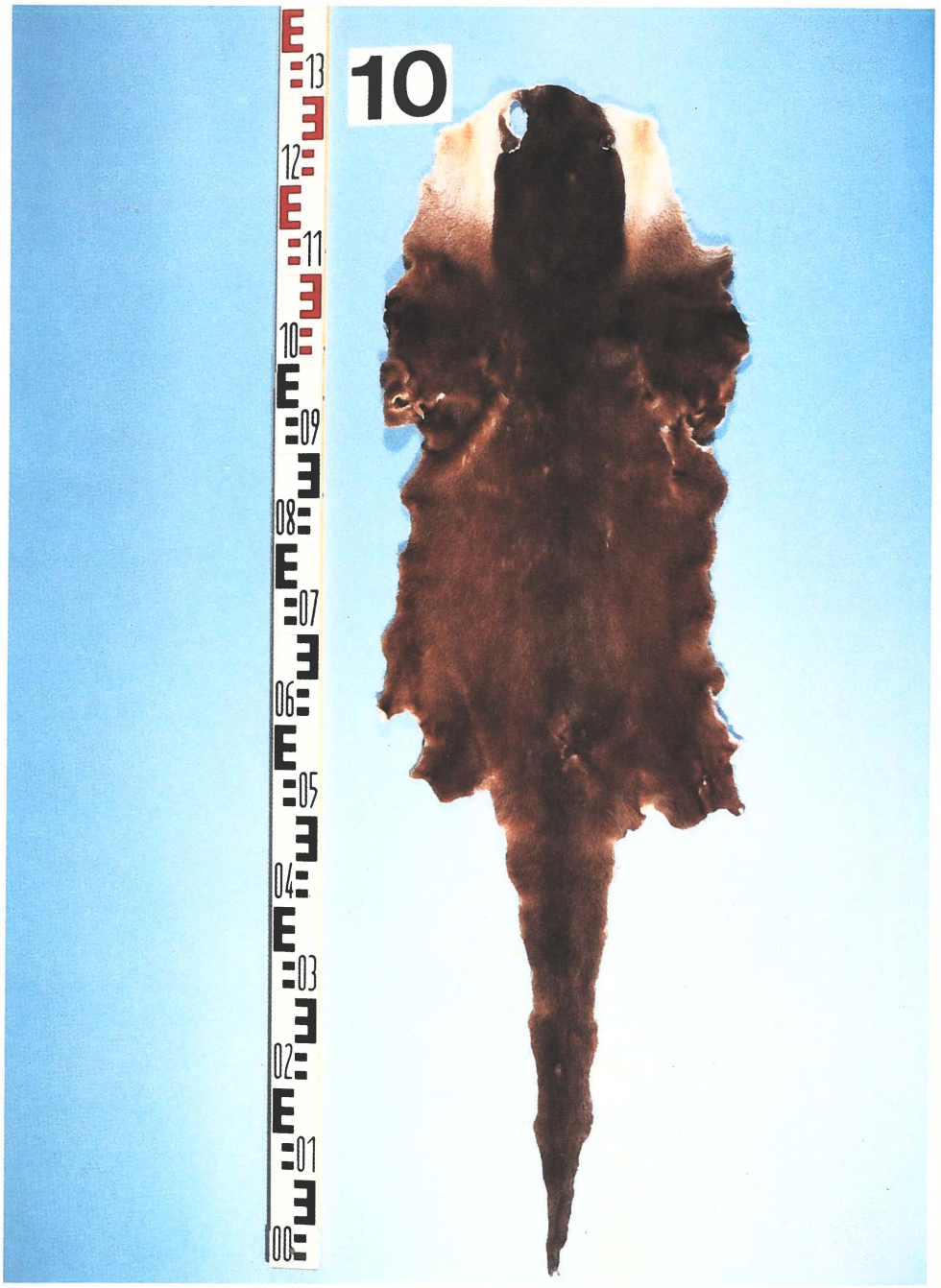
**Trade names:**

none

**Scientif synonyms:**

*Aonyx congica*
*Aonyx microdon*
*Aonyx phillipsi*

*Paraonyx congica*
*Paraonyx microdon*
*Paraonyx philippsi*




Populations of Cameroon and Nigeria
= Appendix I
all other populations = Appendix II

Photo: Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

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1985 (1)

# Enhydra lutris

(Linnaeus, 1758)

**Common names:**

E Sea Otter
F Loutre de mer
R Калан
Морская выдра
S Nutria del Kamtchatka
Nutria marina
D Kalan
Seeotter
I Lontra del Camciatca
Lontra marina

**Trade names:**

"Kamtschatka-Biber"

**Scientific synonyms:**

none

*Enhydra lutris nereis* = Appendix I,
*Enhydra lutris lutris* = Appendix II

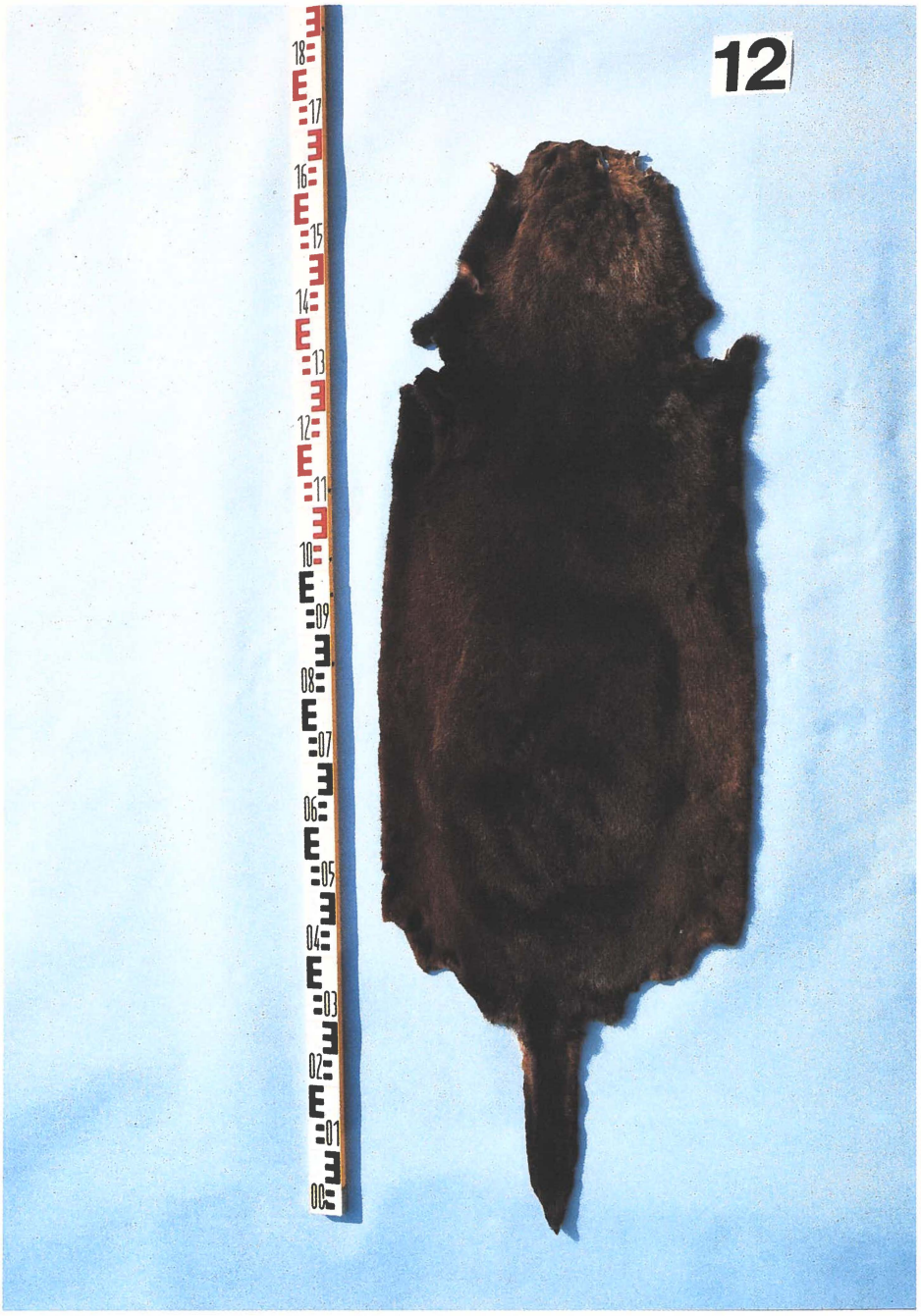


Photo: Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
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Code F-112.004.022.001
1985 (1)

# Lutra canadensis

(Schreber, 1776)

**Common names:**

E River Otter
F Loutre du Canada
R Канадская выдра
Североамерикаская выдра
S Nutria del Canadá
Nutria norteamericana
D Kanada-Otter
Nordamerikanischer Fischotter
I Lontra canadese

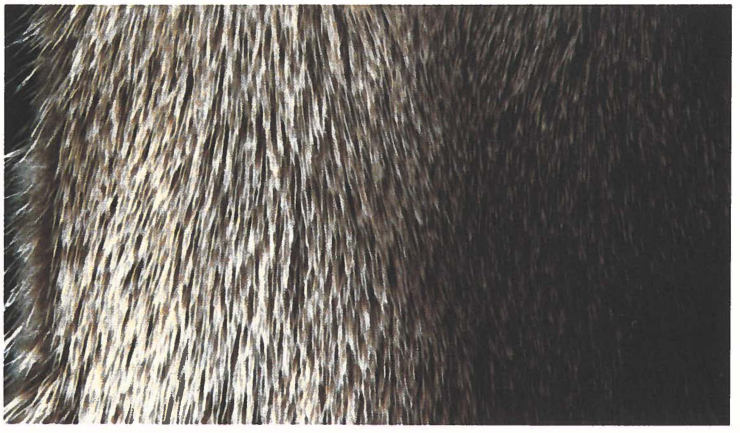
**Trade names:**

"Virginia Otter"
"Florida Otter"

**Scientific synonyms:**

*Lontra canadensis*



②

Detail ca. 1 : 1
left: throat





③

④ Design Ralf Zeitler, Frankfurt

Photos: ① ③ ④ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Lutra felina

(Molina, 1782)

**Common names:**

E Marine Otter
F Loutre de mer
S Gato del mar,
Nutria de mar
Chungungo
Chinchimen
D Meerotter
I Lontra felina

**Trade names:**

"South American Otter"

**Scientific synonyms:**

*Lontra felina*




Photo: Nicole Duplaix, Washington D.C.

Code F-112.004.023.002
1985 (1)

# Lutra longicaudis

(Olfers, 1818)

**Common names:**

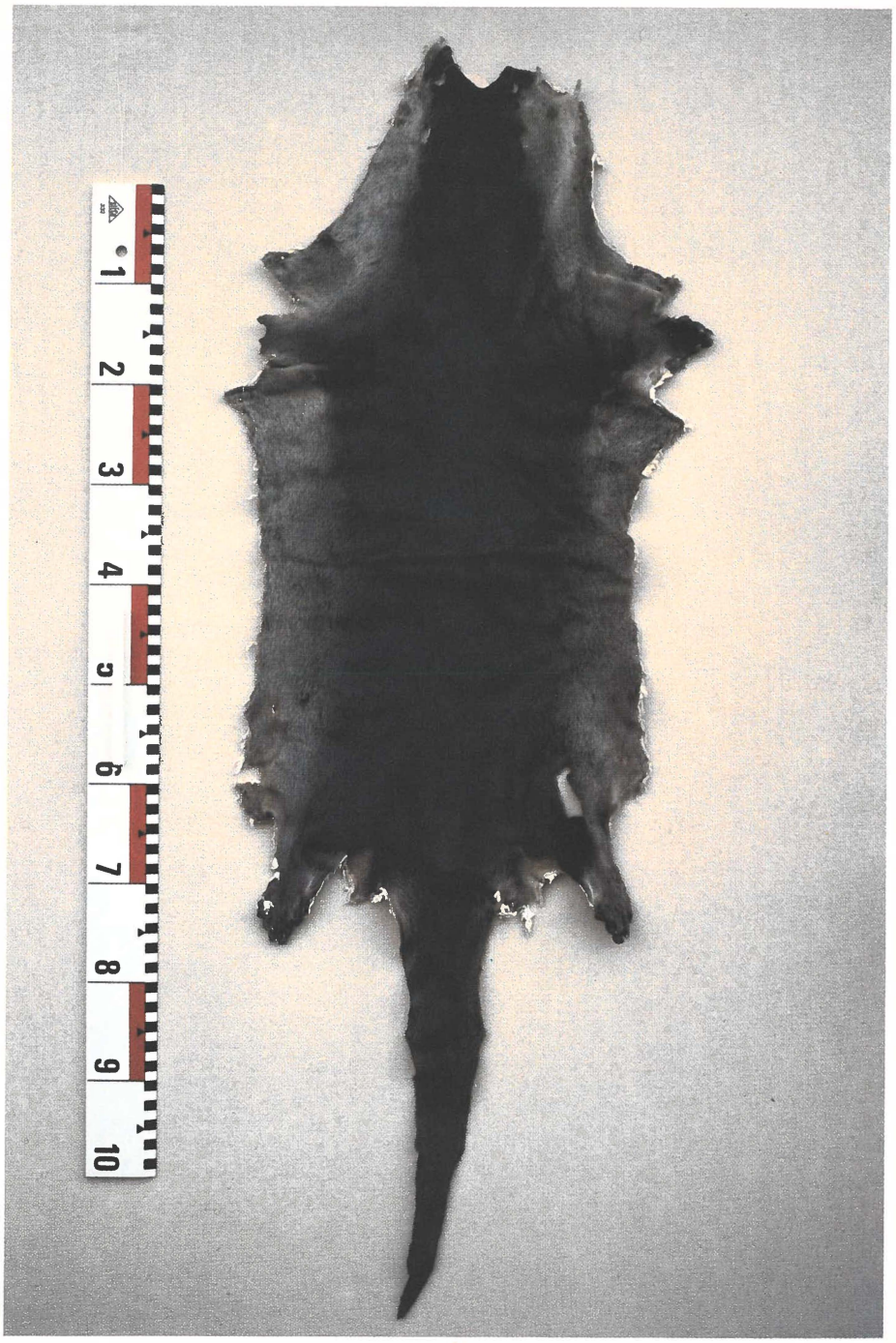
E Southern River Otter
Neotropical River Otter
F Loutre à longue queue
Loutre d'Amérique du Sud
R Мексиканская выдра
Длиннохвостая выдра
S Nutria
Nutria del noroeste
Lobito de Rio
Gato de agua
D Mittelamerikanischer Fischotter
Südamerikanischer Fischotter
I Lontra dell' America centrale
Lontra di fiume (Sud America)

**Trade names:**

"South American Otter"
"Среднеамериканская выдра"

**Scientific synonyms:**

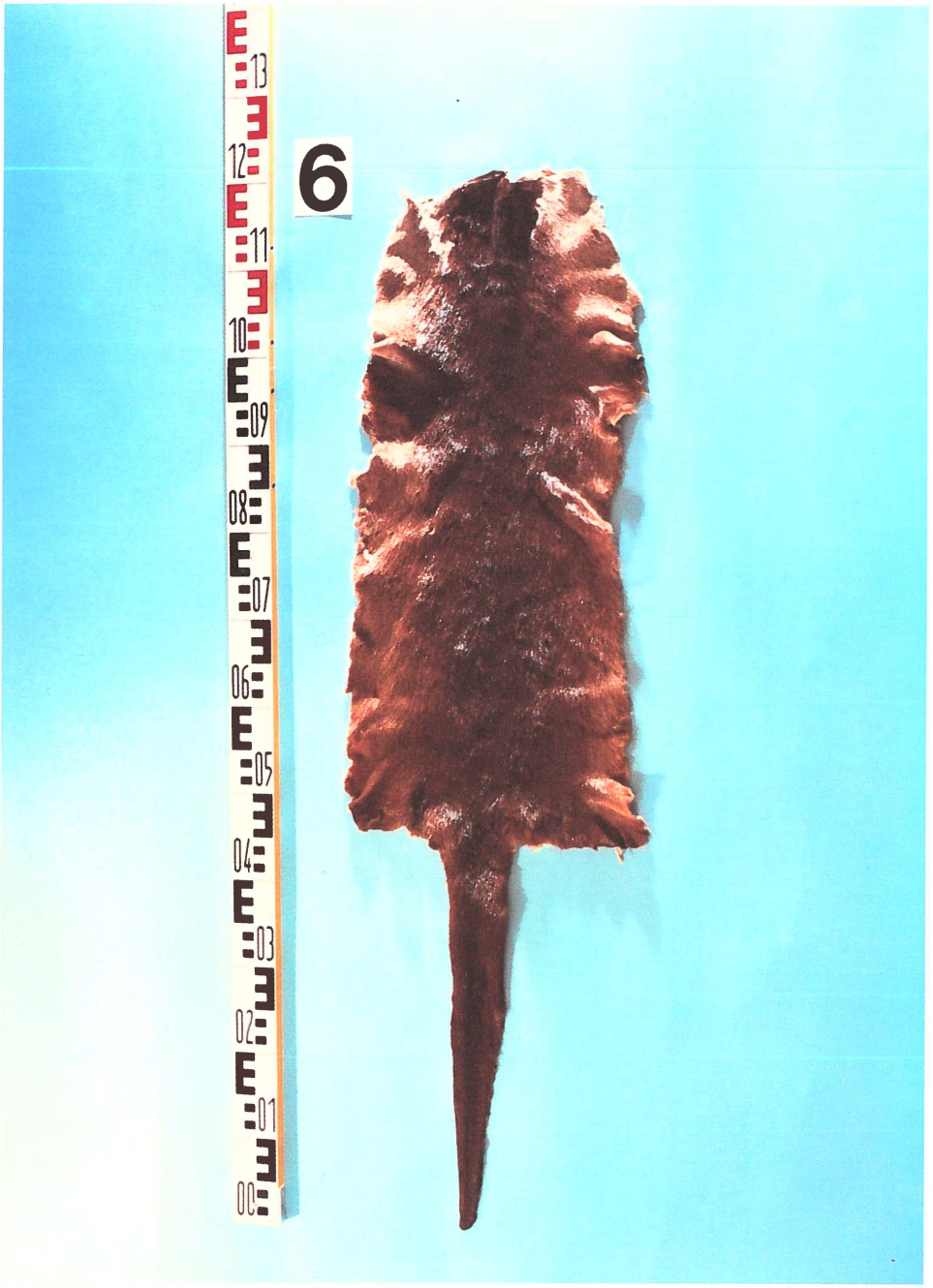
The taxonomy is in the process of revision which may lead to some confusion in the proper common and scientific name to be used.
*Lutra longicaudis* includes:
*Lutra annectens, L.a. colombiana, L. platensis, L. incarum, L. enudris, L. e. mitis, L. insularis, L. repanda, L. latidens.*
Considered by some authors as part of *Lutra canadensis.*
The name *Lontra longicaudis* is frequently seen.



*Lutra longicaudis annectens*
Mexican otter ①



*Lutra longicaudis annectens*
Detail ca. 1:1 ②




③ *Lutra longicaudis incarum*

E Peruvian Otter
F Loutre du Pérou
R Перуанская выдра
S Lobito de río
Nutria de río
Nutria del Perú
Nutria peruana
D Peru-Otter
I Lontra del Peru

Photos: ③ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
①② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Lutra longicaudis






*Lutra longicaudis enudris* ④

E Brazilian River Otter
F Loutre du Brésil
R Гвианская выдра
S Lobito de río
Nutria brasileña
Nutria del Brasil
D Brasilianischer Flussotter
I Lontra del Brasile

Code F-112.004.023.003
1985 (1)



⑤



⑥ Design Ralf Zeitler, Frankfurt

Photos: ④ ⑤ ⑥ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

# Lutra lutra

(Linné, 1758)

**Common names:**

E River Otter
F Loutre de rivière
R Выдра
Речная выдра
S Lutra
Nutria común
D Eurasischer Fischotter
I Lontra comune
Lontra di fiume

**Trade names:**

"Black Otter"
" Land Otter"
"Порешня"
"Bagdadotter"
"Burmaotter"
"Otter"

**Scientific synonyms:**

*Lutra vulgaris*
*Lutra whitleyi*




① China



② Switzerland



Detail ca. 1:1 ③



④ China Otter
Design: Albrecht



⑤

Photos: ① ② ④ ⑤ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
③ Peter Dollinger, Berne
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# Lutra lutra





⑥ Burma Otter
Design: Albrecht

Photo: ⑥ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

Code F-112.004.023.004
1985 (1)

# Lutra maculicollis

Lichtenstein, 1835

**Common names:**

E Spotted-necked Otter
F Loutre à cou tacheté
R Белогорлая выдра
Пятнистая выдра
S Nutria de cuello manchado
D Fleckenhalsotter
I Lontra dal collo macchiato

**Trade names:**

"Kongootter"
"Rhodesia-Otter"

**Scientific synonyms:**

*Hydrictis maculicollis*

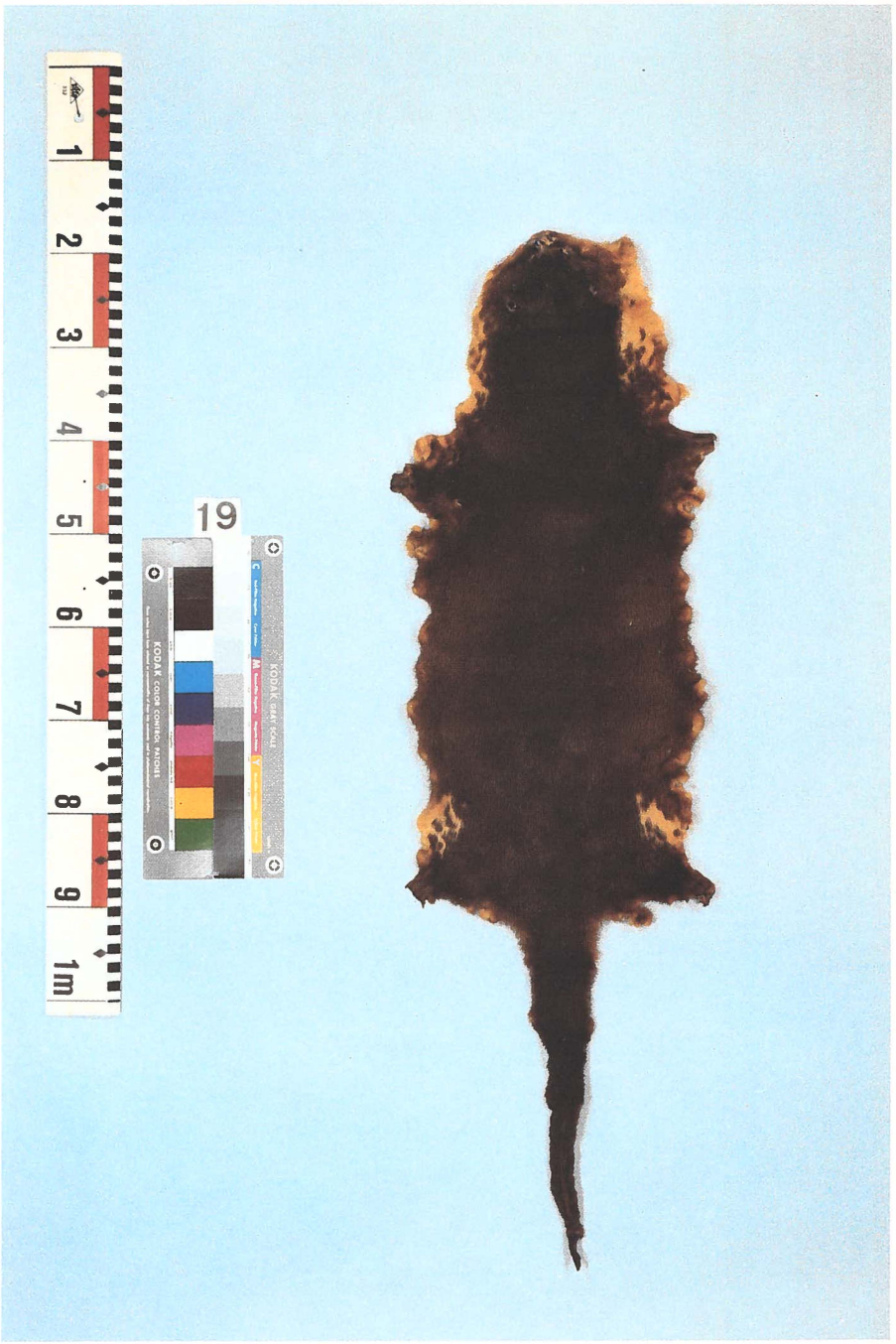


Photo: Wolf Suter, Basel
Submitted by the Management Authority of Switzerland

Code F-112.004.023.005
1985 (1)

# Lutra provocax

(Thomas, 1908)

**Common names:**

E Southern River Otter
F Loutre du Chili
R Южная (речная) выдра
S Huillín
Lobito patagónica
Nutria de Chile
Nutria patagónica
D Südlicher Flussotter
I Lontra del Cile

**Trade names:**

"Washback"

**Scientific synonyms:**

*Lontra provocax*




Photo: Nicole Duplaix, Washington D.C.

Code F-112.004.023.007
1985 (1)

# Pteronura brasiliensis

(Gmelin, 1788)

**Common names:**

E Giant Otter
F Loutre géante du Brésil
R Гигантская выдра
Бразильская выдра
S Arirai
Ariranha
Lobo de río
Lobo grande de río
Nutria gigante
D Riesenotter
I Lontra gigante del Brasile
Arirai

**Trade names:**

"Ariranha-Otter"
"Lontra arianna"

**Scientific synonyms:**

*Lutra brasiliensis*



①



②

Photos: ① Mickey Bohnacker
② Peter Dollinger, Berne

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Code F-112.004.025.001
1985 (1)

# General Notes

Viverrids are much less important furbearers than the weasels, raccoons, dogs and cats. There is a regular trade only in skins of Asian civets of the genera *Viverra* and *Viverricula* neither of which are listed in CITES Appendices but for which the trade uses misleading names such as "civet cat", "serval cat", "servaline" or "Chinese Bush Cat". African civet skins *(Civettictis civetta,* Appendix III) are hardly ever traded as their guard hairs are very harsh and their underfur is rather thin. Also genets *(Genetta* spp.)are only rarely seen in trade, but they should be known to enforcement officers, as the pattern of their pelt resembles that of some of the smaller cat species. In recent years spotted linsang skins *(Prionodon pardicolor)* have been exported from China to European CITES Parties where they were admitted for importation as they were not recognized as originating from an Appendix I-species. Also for the spotted linsang misleading names, such as "jaguar cat" or "rat jaguar" are used.

Civet and linsang skins are often traded as plates. On civet plates originating from China the guard hairs may be plucked. Civet skins are processed mainly into covers, collars and hats, occasionally into garments, mainly for men. Linsangs which have a very soft fur, and genets are used for the production of ladies' garments.

The following species are illustrated in this section:

| | |
|---|---|
| F-112.005.001.000 | Genetta felina |
| | Genetta tigrina |
| F-112.005.003.001 | Poiana richardsoni |
| F-112.005.004.002 | Prionodon pardicolor |
| F-112.005.005.001 | Civettictis civetta |
| F-112.005.005.004 | Viverra zibetha |

**Bibliography:**

Kroll, J. & Franke, F. (1982). Jury Fränkel's Rauchwarenhandbuch. Murrhardt.

Colour printing of the chapter on Viverridae has been sponsored by the Artenschutzkreis des Kürschnerhandwerks e.V. and the German Fur Trade Federation

not listed

# Genetta spp.

G. Cuvier, 1816

**Common names:**

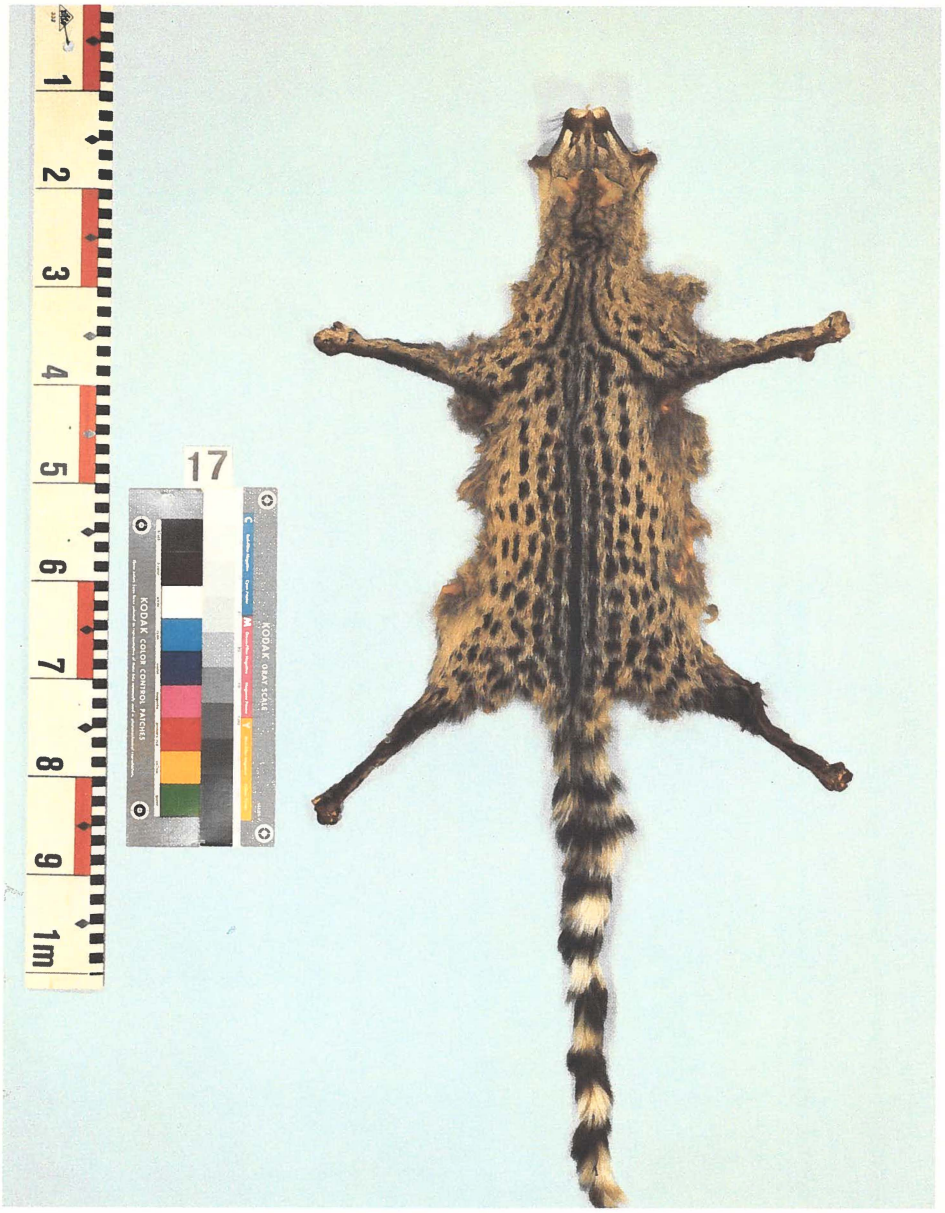
E Genets
F Genettes
R Генеты
S Ginetas
D Genettekatzen
Ginsterkatzen
I Genette

**Trade names:**

none

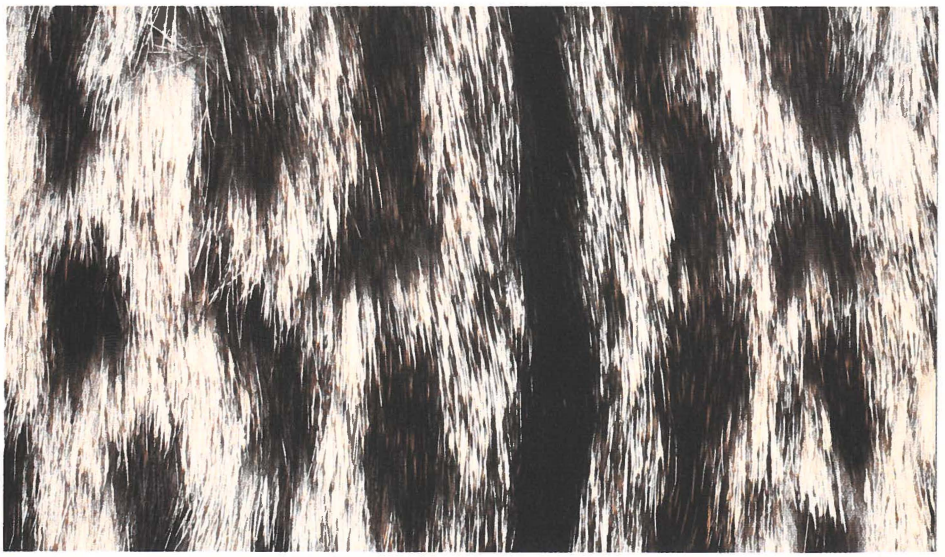
**Scientific synonyms:**

none



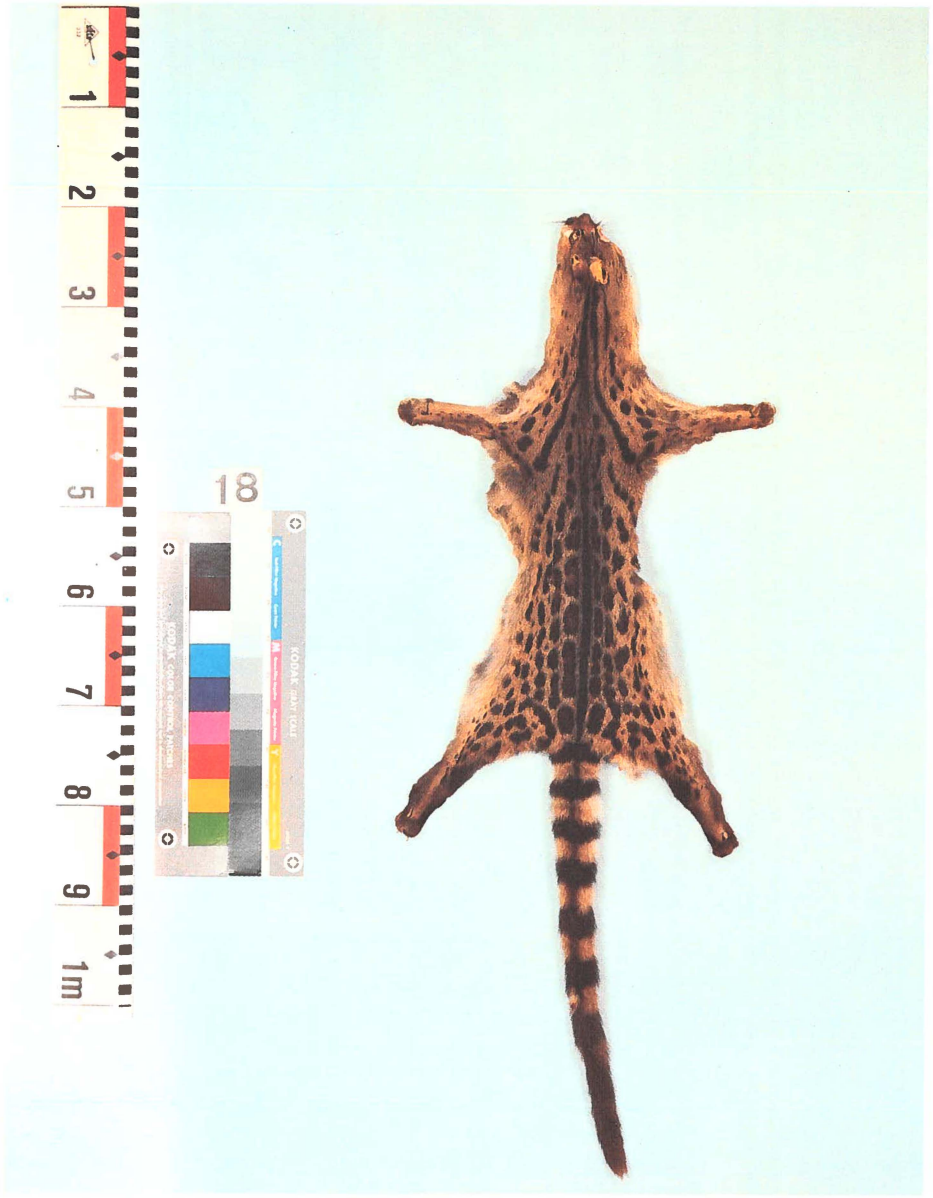

*Genetta felina*
Botswana

①



Detail ca. 1 : 1

②



③ *Genetta tigrina*
F-112.005.001.007



④ Detail ca. 1 : 1

Photos: ①③ Wolf Suter, Basel, ②④ Peter Dollinger, Berne.
Submitted by the Management Authority of Switzerland

not listed

# Poiana richardsoni

(Thomson, 1842)

**Common names:**

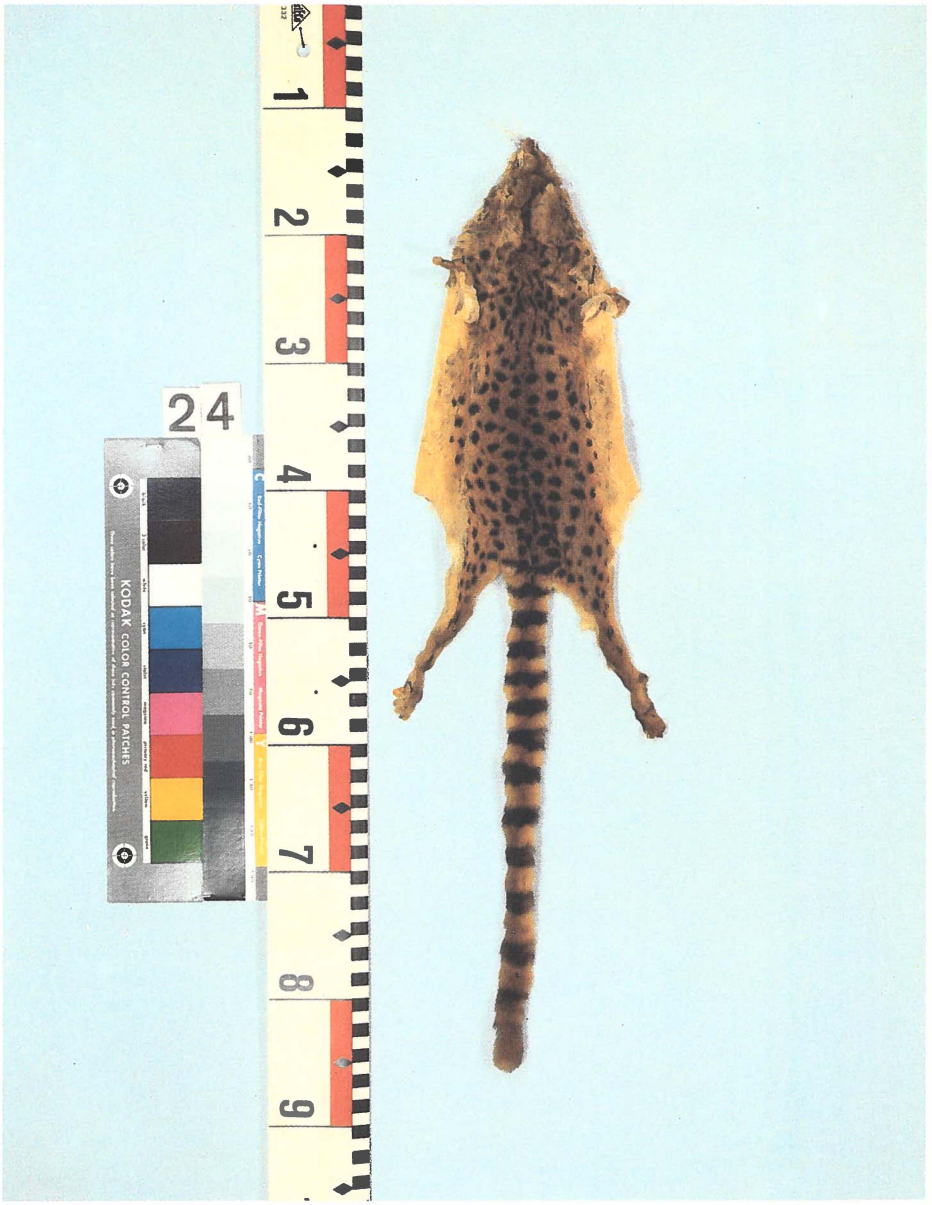
E African Linsang
F Poiane
D Afrikanischer Linsang
Poiana
I Linsango africano

**Trade names:**

none

**Scientific synonyms:**

*Poiana leightoni*
*Poiana liberiensis*

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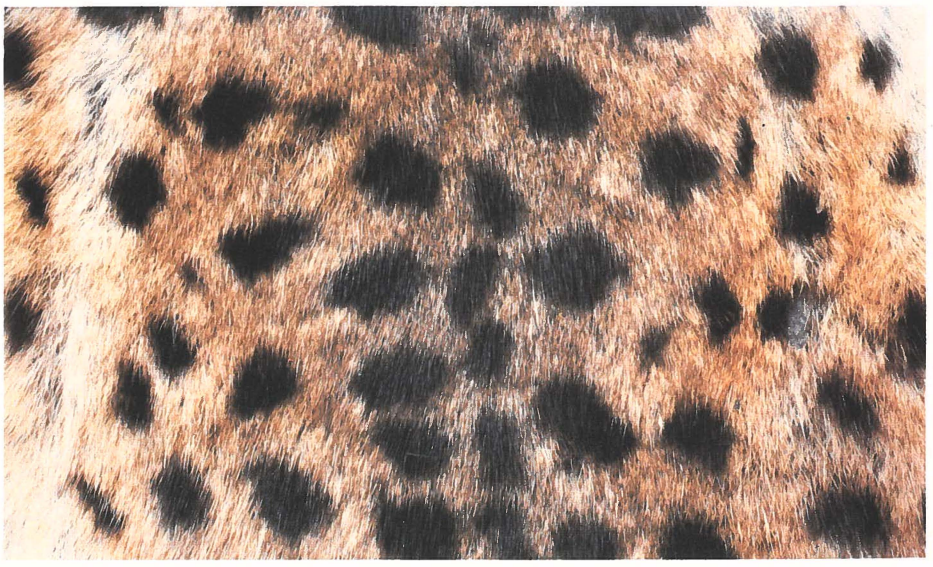

Detail ca. 1 : 1 ②

Photos: ① Wolf Suter, Basel
② Peter Dollinger, Berne

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Code F-112.005.003.001
1985 (1)

# Prionodon pardicolor

Hodgson, 1842

**Common names:**

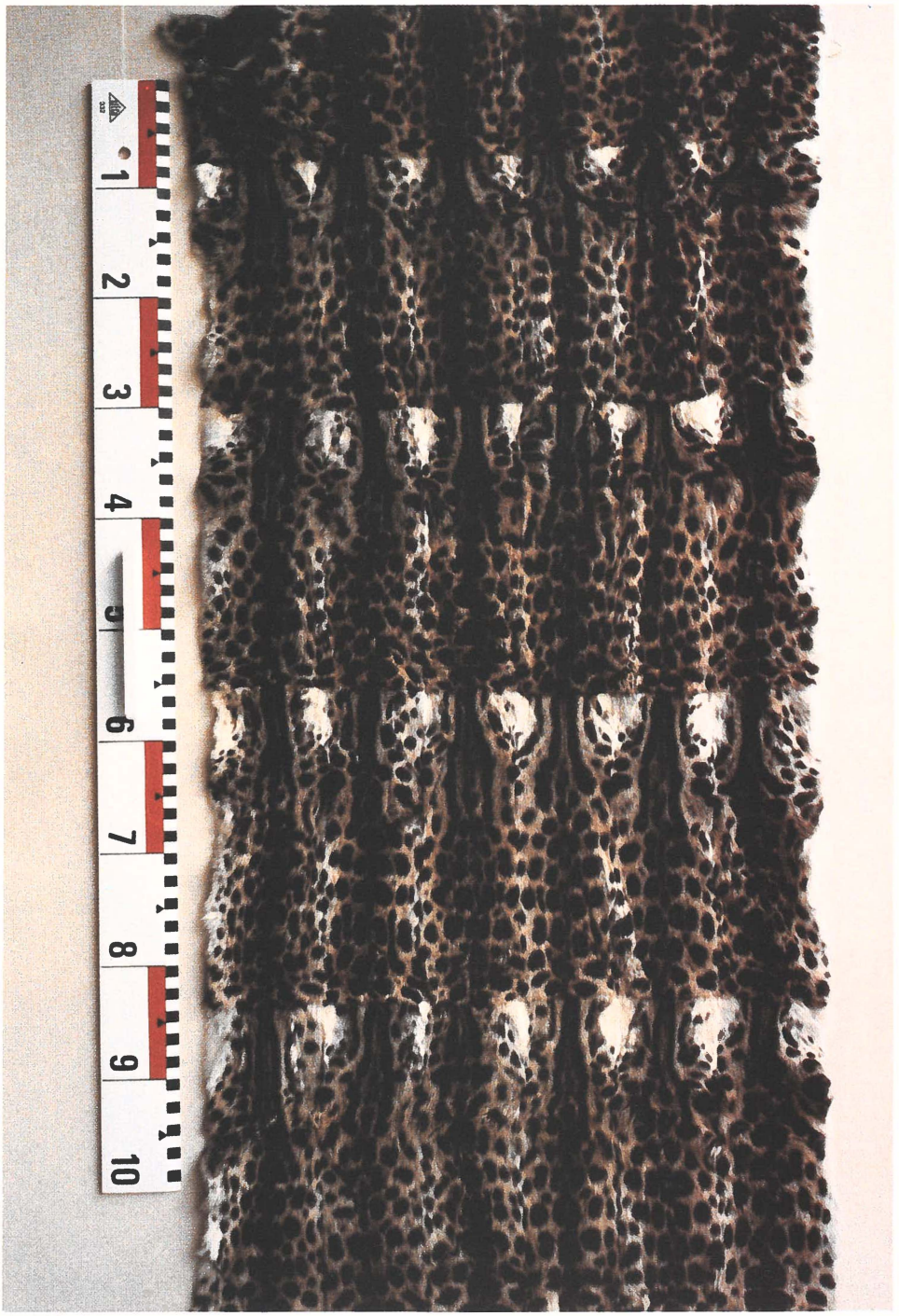
E Spotted Linsang
F Linsang tacheté
S Cibeta moteada
D Fleckenlinsang
I Linsango macchiato

**Trade names:**

"Rat jaguar"
"Jaguarkatze"

**Scientific synonyms:**

none



①

Plate manufactured in the People's Republic of China



② Detail ca. 1 : 1

Photos: Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Civettictis civetta

(Schreber, 1777)

**Common names:**

E African Civet
F Civette d'Afrique
R Африканская цивеа
S Civeta africana
D Afrika-Zibetkatze
I Zibetto africano

**Trade names:**

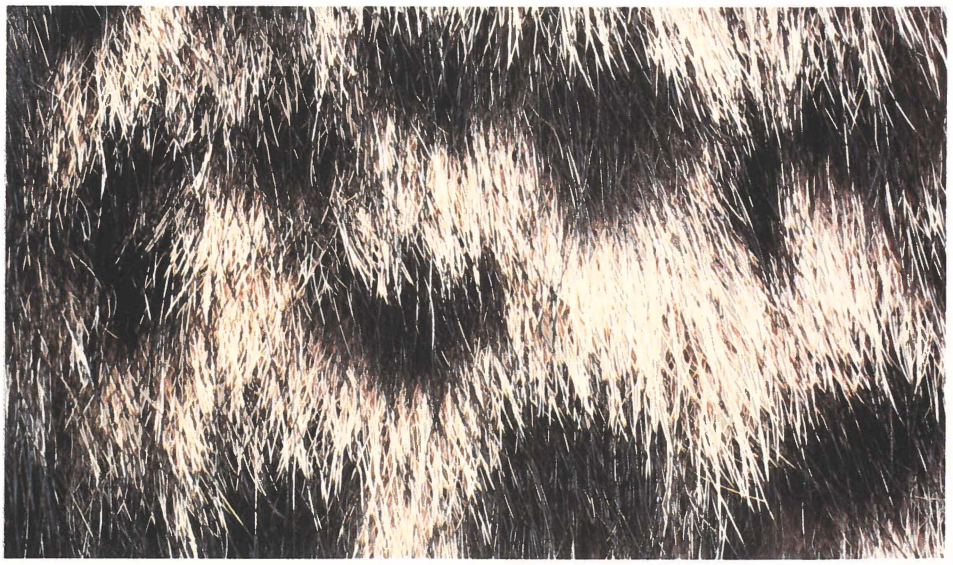
none

**Scientific synonyms:**

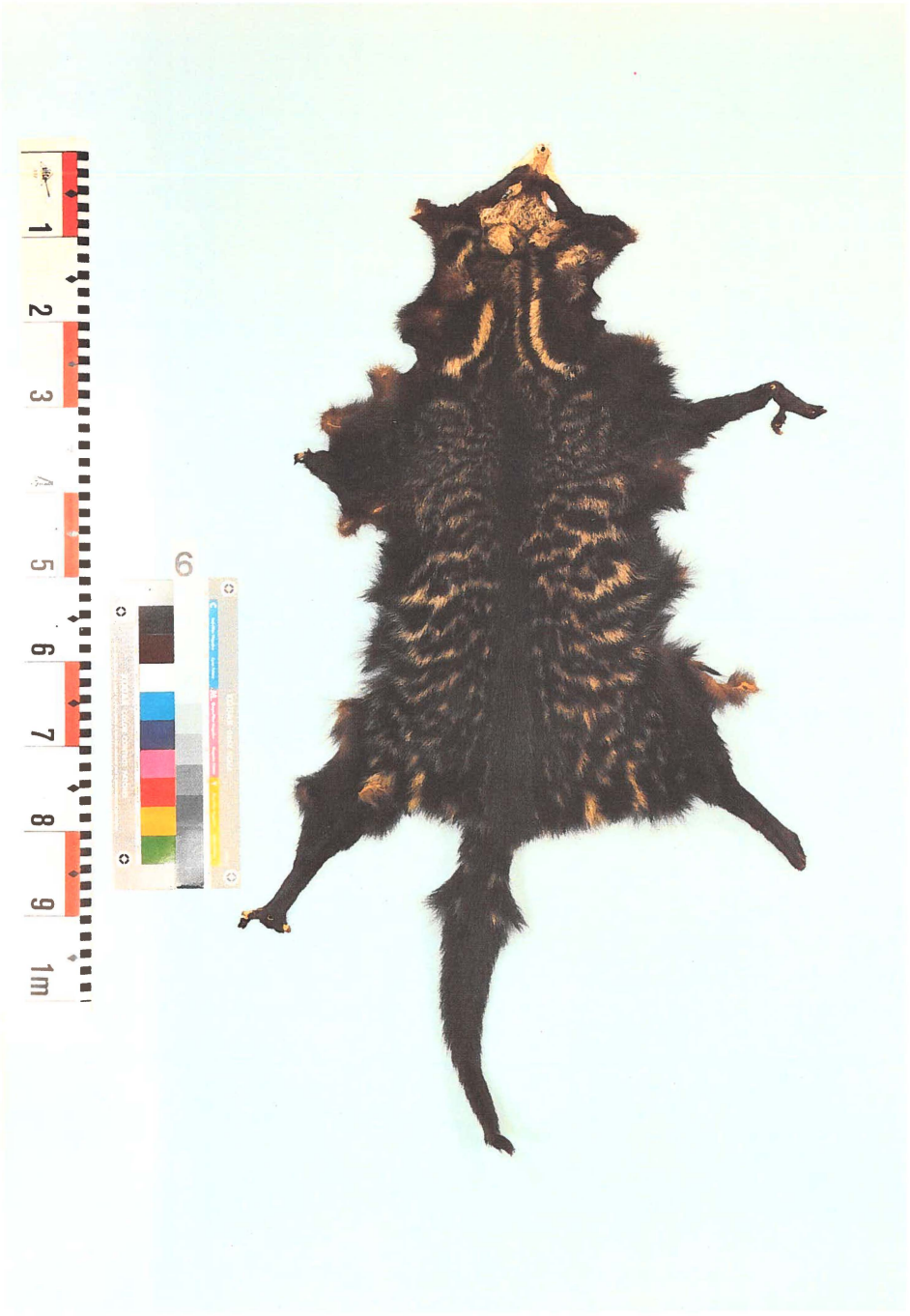
*Viverra civetta*



*Civettictis civetta schwarzi* ①



Detail ca. 1 : 1 ②



③

*Civettictis civetta congica*

Photos: ① ③ Wolf Suter, Basel, ② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Viverra zibetha

Linné, 1758

**Common names:**

E Large Indian Civet
F Grande civette de l'Inde
R Большая цтвета
Индийская цивета
S Gran civeta de la India
D Indien-Zibetkatze
I Zibetto indiano

**Trade names:**

"Chinese Bush Cat"
"Civet Cat"
"Genet Cat"
"Serval"

**Scientific synonyms:**

none



Design Levy

Photo: Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

Code F-112.005.005.004
1985 (1)

# General Notes



Cats are among the most important furbearers. Their fur is quite durable (wearing coefficient between 75 and 50%, i.e. comparable with that of mink, raccoon or coyote, and better than coypu, weasel and most qualities of foxes and skunks), and shows in most species an attractive spot or stripe pattern.

Cat fur skins can be differenciated from other furs as follows:

- the fur consists of guard hairs and underfur
- monkey furs have no underfur
- the guard hairs form a continuous cover which almost hides the underfur
- in muskrat, mink, some marten, and opossum furs the guard hairs are scattered, and the underfur is clearly visible
- the guard hairs are straight
- the guard hairs of moles, cervids and many bovides are undulated
- the fur covers also the tail
- the tail is naked in muskrat, beaver, coypu, and opossum
- the tail is evenly thick from its base to the tip, or only slightly tapered
- the tail is narrow at its base, bushy in the middle part and pointed at the tip in foxes, wolves and other dogs
- the tail is heavily tapered in viverrids and most otters
- there is no scent gland on the upper side of the tail
- there is a scent gland on the tail of foxes, wolves and other dogs
- the belly has the same colour or is lighter than the back
- the back is lighter than the belly in badgers and in the raccoon dog
- black markings on the upper side are never on a white ground (except in domestic cats and albinistic specimens)
- black and white markings of the upper side exist in mustelids (skunks), viverrids (civets) and zebras
- the skin is at least 45 cm long (adults, without tail)
- skins from many insectivores, rodents and mustelids are shorter than 45 cm

The quality of cat furs varies from species to species. This variation concerns e.g.

- the number of hairs per sq. cm
- the guard hair: underfur hair ratio
- the length of the guard hairs / underfur hairs on the back / belly
- the diameter of the guard hairs / underfur hairs

The following table shows the variation in some of these parameters in the Felidae species of the Soviet Union (after Heptner and Sludskij, 1980):

| Species | n of hairs per cm2 back | n of hairs per cm2 belly | guard hair: underfur hair ratio (back) | length of guard hairs (mm) back | length of guard hairs (mm) belly |
|---|---|---|---|---|---|
| Felis b. euptilura | 7'000 | 1'950 | 1:30 | 49 | 45 |
| Felis caracal | 2'500 | < 1'000 | 1:4 to 5 | 39 | 71 |
| Felis chaus | 4'000 | 1'700 | 1:12 | 61 | 50 |
| Felis lynx | 9'000 | 4'600 | 1:12–13 | 51 | 70 |
| Felis manul | 9'000 | 800 | 1:10 | 69 | 40 |
| Felis margarita | 4'500 | | | 55 | |
| Felis s. ornata | 3'500 | | 1:8 | 51 | 54 |
| Felis s. silvestris | 9'000 | 2'000 | 1:10 to 17 | 72 | |
| Panthera pardus | 3'000 | | 1:4 | 40–50 | 50–70 |
| Panthera tigris | 2'500 | 600 | 1:1,4 | 40–50 | 65–105 |
| Panthera uncia | 4'000 | | 1:8 | 54 | |
| Acinonyx jubatus | 2'000 | 600 | 1:6 | 35 | 77 |

The following table gives an approximate picture of the trade volume of the different cat species. It is based on computer tabulations provided by the Wildlife Trade Monitoring Unit of IUCN, but every effort has been made to avoid double-counting due to the export and subsequent re-export of the same skins within the same year. It cannot be guaranteed that the WTMU tabulations have always been interpreted correctly. In addition, it has to be considered that WTMU computer printouts are incomplete, due to the very poor reporting by many Parties.
The table refers to complete raw and tanned skins only. It includes personal and household effects, as well as hunting trophies. Skins "traded" for the purpose of the preparation of this manual have not been considered.

Colour printing of the chapter on Felidae fur skins has been sponsored by the Fördererverein des Kürschnerhandwerks für vielfältige Tierartenerhaltung und Umweltschutz e.V. and the German Fur Trade Federation

Code F-112.007.000.001
1983 (1)

| Species | 1980 | 1981 | Main exporting countries |
|---|---|---|---|
| Felis aurata | 3 | 2 | |
| Felis badia | 0 | 0 | |
| Felis bengalensis* | 7'390 | 5'227 | PR China, DPR Korea |
| Felis bieti | 0 | 0 | |
| Felis caracal | 5'828 | 65 | Namibia, South Africa |
| Felis chaus | 13'906 | 3 | Pakistan, India |
| Felis colocolo | 11'046 | 4'299 | Paraguay, Argentina, Uruguay |
| Felis concolor | 236 | 2'046 | Paraguay, Argentina, Canada, USA |
| Felis geoffroyi | 66'854 | 97'438 | Paraguay, Argentina |
| Felis guigna | 0 | 0 | |
| Felis iriomotensis | 0 | 0 | |
| Felis jacobita | 0 | 0 | |
| Felis lynx** | 35'891 | 31'076 | Canada, USA, USSR |
| Felis manul | 1'441 | 2'806 | Mongolia, USSR |
| Felis marmorata | 0 | 0 | |
| Felis margarita | 0 | 0 | |
| Felis pardalis | 33'209 | 22'584 | Paraguay, Panama, Peru, Belize, Mexico*** |
| Felis planiceps | 0 | 0 | |
| Felis rubiginosa | 0 | 0 | |
| Felis rufa**** | 52'430 | 75'448 | USA, Canada, Mexico*** |
| Felis serval | 865 | 752 | Mali, Ethiopia |
| Felis silvestris | 37'775 | 7'769 | Namibia, Pakistan, USSR, Bulgaria |
| Felis temmincki | 0 | 0 | |
| Felis tigrina | 33'492 | 35'300 | Paraguay, Argentina, Panama |
| Felis viverrina | 0 | 2 | |
| Felis wiedii | 22'145 | 17'905 | Paraguay, Peru, Panama |
| Felis yagouaroundi | 3 | 1 | Mexico |
| Panthera leo | 185 | 422 | Botswana, South Africa, Zimbabwe, Zambia |
| Neofelis nebulosa | 0 | 0 | |
| Panthera onca | 619 | 48 | Paraguay |
| Panthera pardus | 424 | 116 | Ethiopia |
| Panthera tigris | 11 | 14 | South Africa (captive bred), PR China |
| Panthera uncia | 0 | 3 | USSR |
| Acinonyx jubatus | 47 | 12 | Ethiopia |
| Total | 323'800 | 303'336 | |

* mostly traded as plates
** includes *canadensis,* re-exports have not been considered
*** hunting trophies only
**** re-exports have not been considered

**Bibliography:**


Heptner, V.G. and Sludskij, A.A. (1980) Die Säugetiere der Sowjetunion. Band III: Raubtiere (Feloidea). Jena.
Kroll, J. & Franke F. (1976) Jury Fränkel's Rauchwarenhandbuch. Murrhardt.
Secretariats CITES (1983) Trade Statistics for the Year 1980. Gland.
Secretariats CITES (1983) Trade Statistics for the Year 1981. Gland.



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Bundes-Pelzfachschule, D-6000 Frankfurt am Main, FR Germany
Swiss Federal Veterinary Office, CH-3097 Liebefeld-Berne, Switzerland
Naturhistorisches Museum Basel, CH-4001 Basel, Switzerland
Naturhistorisches Museum Bern, CH-3005 Bern, Switzerland
Zoologisches Museum der Universität, CH-8057 Zürich, Switzerland
Bombay Natural History Society, Bombay, India

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The author wishes to thank all concerned for their valuable contributions.



Text: Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

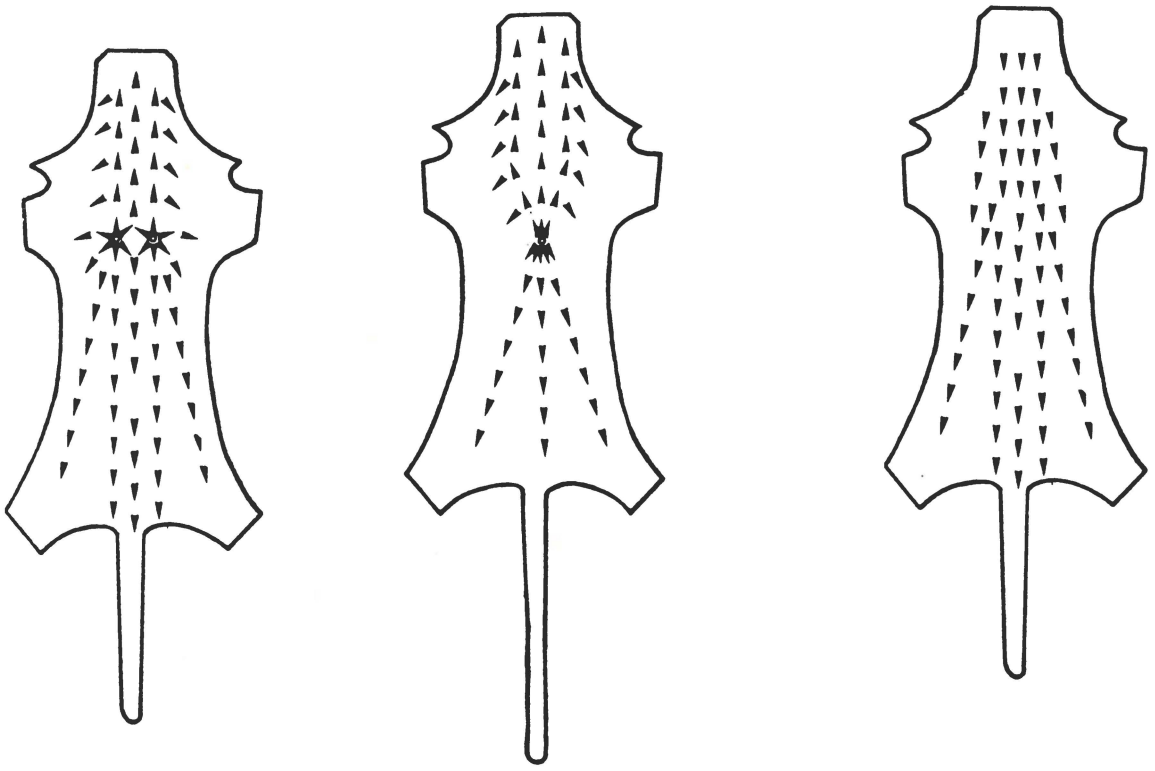
# Identification Aid to Cat Fur Skins



| | Size | | | Tail | | | Pattern | | | | Guard hairs | | | Hair-line on neck | | No of whirls on shoulder | | | Under-wool | | | Fur qua-lity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | large (> 100 cm) | medium (80-100 cm) | small (< 80 cm) | long | medium | short | spotted | striped | plain spotted above below | plain | long | medium | short | towards crown | towards body | 2 | 1 | 0 | plentyful | medium | few | coarse | soft |
| Felis aurata | | ● | ● | ● | ● | | ● | | ● | | | | ● | ● | | ● | | ● | | | ● | | ● |
| Felis badia | | | ● | ● | | | | | | ● | | | | | ● | | | ● | | | ● | | |
| Felis bengalensis | | | ● | | ● | | ● | | | | | | ● | | ● | | | ● | | ● | ● | | ● |
| Felis b. euptilura | | ● | ● | | ● | | ● | | | | ● | ● | | | ● | | | ● | ● | | | | ● |
| Felis bieti | | ● | ● | ● | ● | | | | ● | | ● | | | | ● | | | ● | ● | | | | ● |
| Felis caracal | | ● | | | | ● | | | | ● | | ● | ● | | ● | | | ● | | | ● | ● | |
| Felis s. catus | | | ● | | ● | | ● | ● | | ● | | ● | ● | | ● | | | ● | ● | ● | | | ● |
| Felis chaus | | | ● | | | ● | | ● | | ● | ● | ● | | | ● | | | ● | ● | ● | | ● | |
| Felis colocolo | | | ● | | ● | ● | ● | | ● | | ● | | | | ● | | | ● | | | ● | ● | |
| Felis concolor | ● | | | ● | | | ● | | | ● | | | ● | | ● | | | ● | | | ● | ● | |
| Felis geoffroyi | | | ● | | ● | | ● | | | | | | ● | | ● | | | ● | | ● | ● | | ● |
| Felis guigna | | | ● | | | ● | ● | | | | | | ● | | ● | | | ● | | ● | ● | | ● |
| Felis iriomotensis | | | ● | | ● | | ● | | | | | | ● | | ● | | | ● | | ● | | | ● |
| Felis jacobita | | | ● | ● | | | ● | | | | ● | | | | ● | | | ● | ● | | | | ● |
| Felis lynx | ● | ● | | | | ● | ● | | ● | | ● | ● | | | ● | | | ● | ● | | | | ● |
| Felis manul | | | ● | | ● | | | ● | | | ● | | | | ● | | | ● | ● | | | | ● |
| Felis margarita | | | ● | | ● | | | ● | | | ● | | | | ● | | | ● | ● | | | | ● |
| Felis marmorata | | | ● | ● | | | ● | | | | | ● | | | ● | | | ● | ● | | | | ● |
| Felis nigripes | | | ● | | ● | | ● | | | | | ● | | | ● | | | ● | ● | | | | ● |
| Felis pardalis | | ● | | | ● | | ● | | | | | | ● | ● | | ● | | | | | ● | | ● |
| Felis planiceps | | | ● | | | ● | | | ● | | | ● | | | ● | | | ● | ● | | | | ● |
| Felis rubiginosa | | | ● | | ● | | ● | | | | | | ● | | ● | | | ● | | | ● | | ● |
| Felis rufa | | ● | | | | ● | ● | | ● | | ● | ● | | | ● | | | ● | ● | ● | | | ● |
| Felis r. escuinapae | | ● | | | | ● | ● | | ● | | | | ● | | ● | | | ● | | | ● | ● | ● |
| Felis serval | | ● | | | | ● | ● | | | | | ● | ● | | ● | | | ● | | | ● | ● | |
| Felis s. lybica (group) | | | ● | | ● | | | ● | | | | | ● | | ● | | | ● | | | ● | ● | ● |
| Felis s. ornata (group) | | | ● | | ● | | ● | | | | | ● | | | ● | | | ● | | ● | | ● | ● |
| Felis s. silvestris (group) | | | ● | | ● | ● | | ● | | | ● | | | | ● | | | ● | ● | | | | ● |
| Felis temmincki | | ● | | ● | ● | | ● | | ● | | | ● | ● | | ● | | | ● | | ● | ● | ● | ● |
| Felis tigrina | | | ● | | ● | | ● | | | | | | ● | | ● | | | ● | | | | | ● |
| Felis viverrina | | ● | | | | ● | ● | | | | | ● | | | ● | | | ● | | ● | | ● | |
| Felis wiedii | | | ● | ● | | | ● | | | | | | ● | ● | | | ● | | | | ● | | ● |
| Felis yagouaroundi | | | ● | ● | | | ● | | | | | | ● | | ● | | | ● | | | ● | ● | |
| Panthera leo | ● | | | ● | ● | | | | | ● | | | ● | ● | | ● | | | | | ● | ● | |
| Neofelis nebulosa | ● | ● | | ● | | | ● | | | | | | ● | | ● | | | ● | | ● | | | ● |
| Panthera onca | ● | | | | ● | | ● | | | | | | ● | ● | | ● | | | | | ● | ● | |
| Panthera pardus | ● | | | ● | | | | ● | | | | ● | ● | ● | | ● | | | | | ● | ● | ● |
| Panthera tigris | ● | | | | ● | | ● | | | | ● | ● | ● | | ● | | | ● | | | ● | ● | |
| Panthera uncia | ● | | | ● | | | ● | | | | ● | | | | ● | | | ● | | ● | | | ● |
| Acinonyx jubatus | ● | | | ● | | | ● | | | | | | ● | | ● | | | ● | | | ● | ● | |

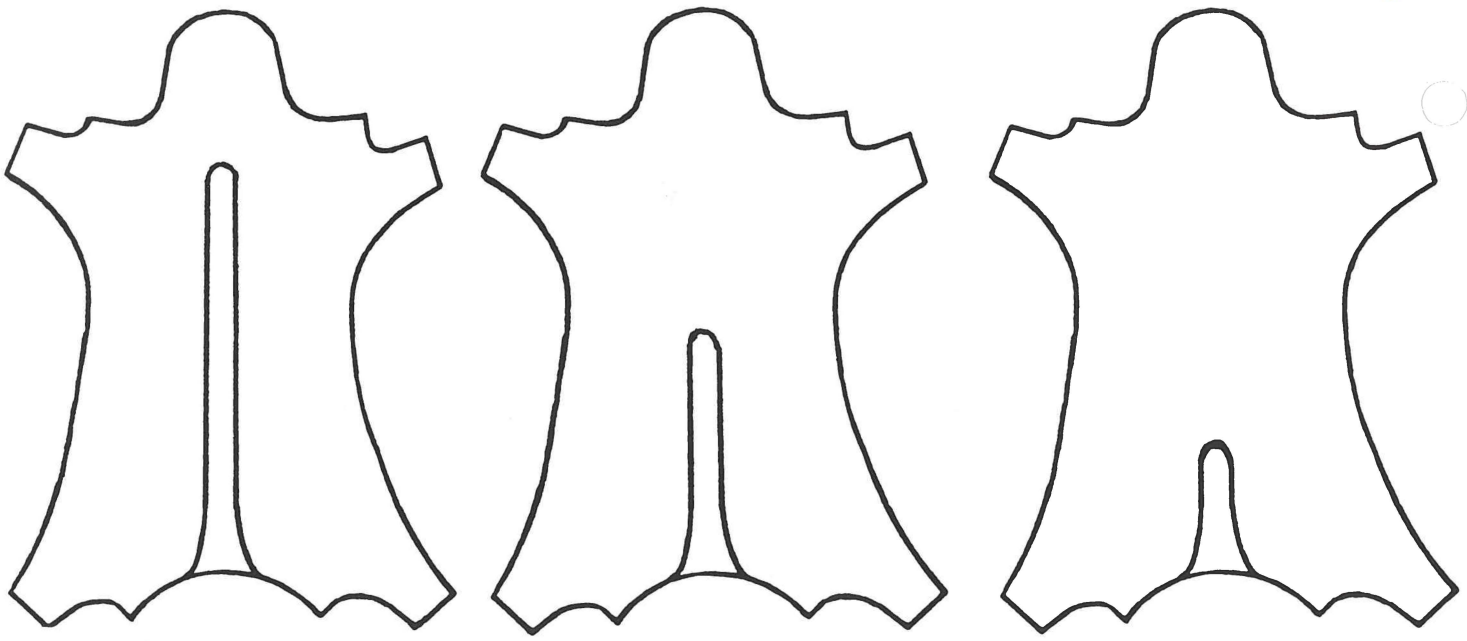
Code F-112.007.000.003
1983 (1)

*Hairline*



*two whirls* *one whirl* *no whirl*

*Tail length:*



*long* *medium* *short*

Text and drawings: Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis aurata

Temminck, 1827

**Common names:**

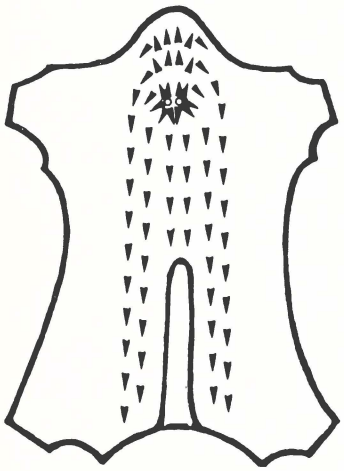
E African Golden Cat
F Chat doré d'Afrique
R Золотая кошка
S Gato dorado africano
D Afrikanische Goldkatze
I Gatto dorato africano

**Trade names:**

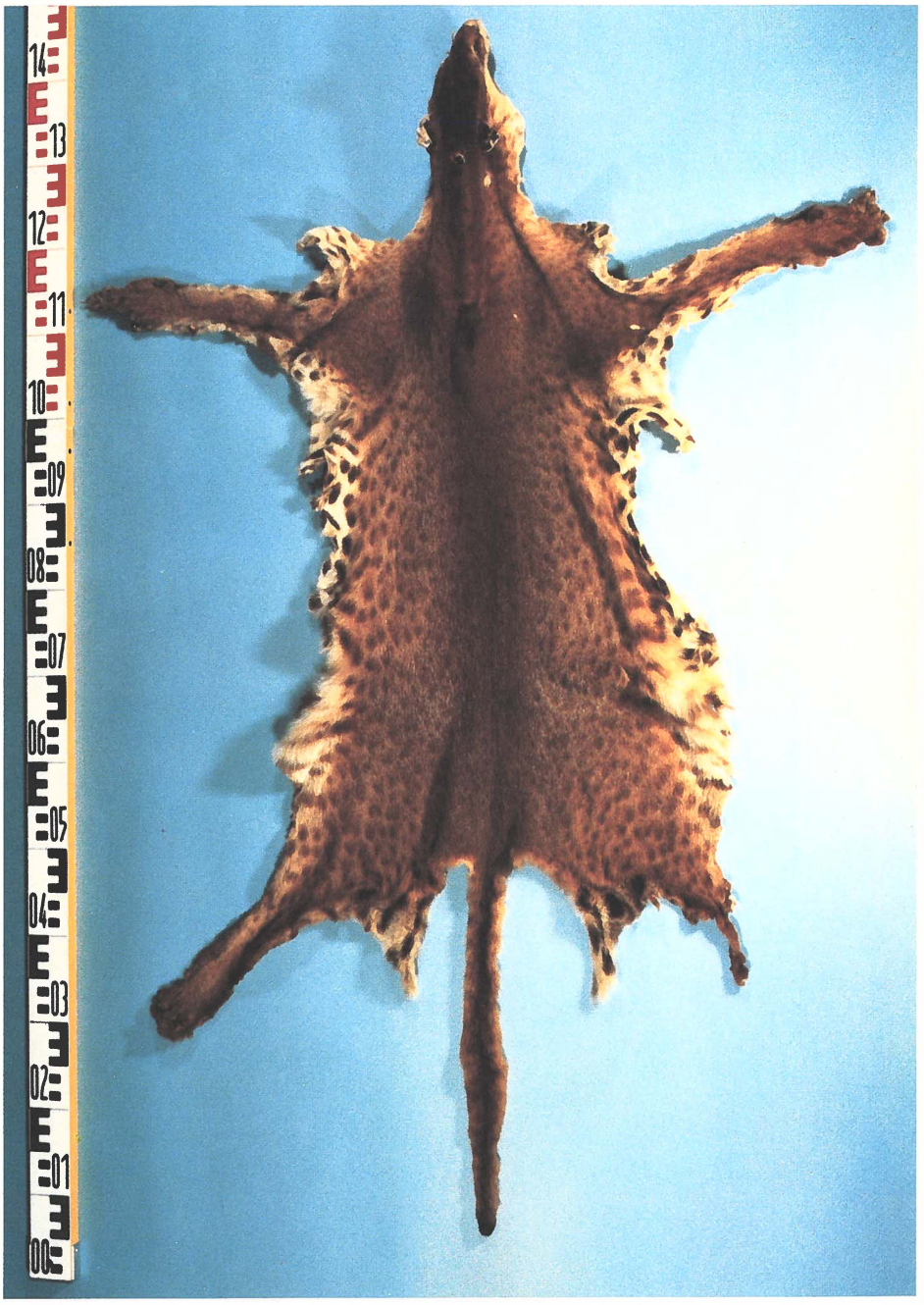
"African Leopard Cat"

**Scientific synonyms:**

*Profelis aurata*



The tail reaches to the middle of the back only.
The hairline on the neck is directed towards the crown. Two whirls, standing very close together, on the shoulder.



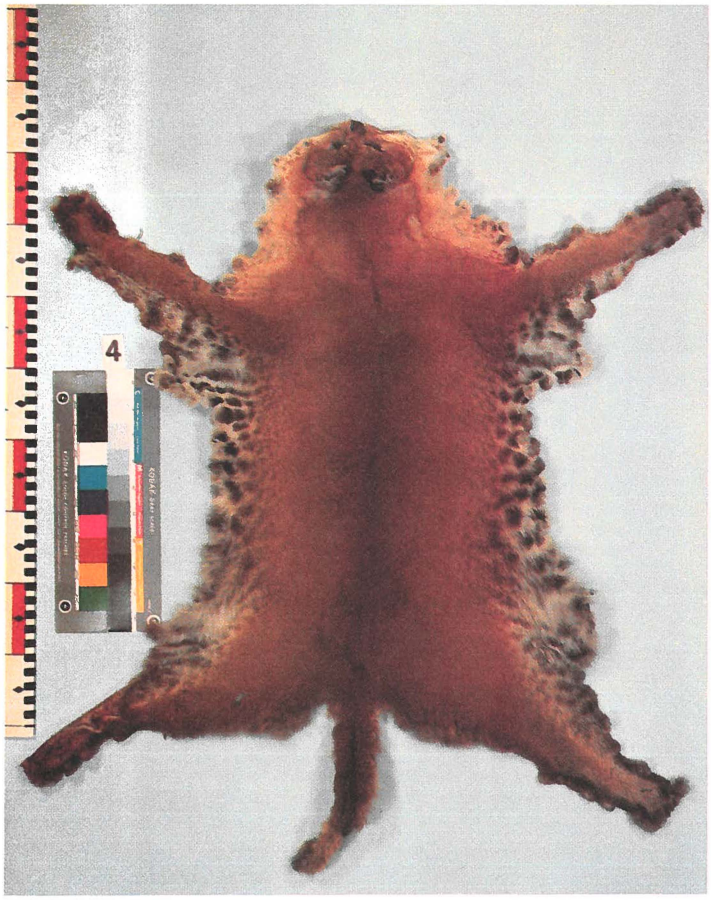
①
*Felis aurata aurata*
Central African golden cat



②
*Felis aurata aurata*
Detail ca. 1:1



③
*Felis aurata aurata*
red phase



④
*Felis aurata aurata*
greyish-brown phase

Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft,
② Peter Dollinger, Berne, ③ ④ ⑤ Wolf Suter, Basel
Submitted by the Management Authority of Switzerland

# Felis bengalensis

Kerr, 1792

**Common names:**

E Leopard Cat
F Chat léopard du Bengal
R Бенгальская кошка
S Gato bengalí
Gato de Bengala
D Bengalkatze
I Gatto del Bengala
Gatto leopardo

**Trade names:**

"Lipiskin"
"Chat lipi"
"Chinakatze"
"Leopardkatze"
"Gatto tigre"
"Gato leopardo"

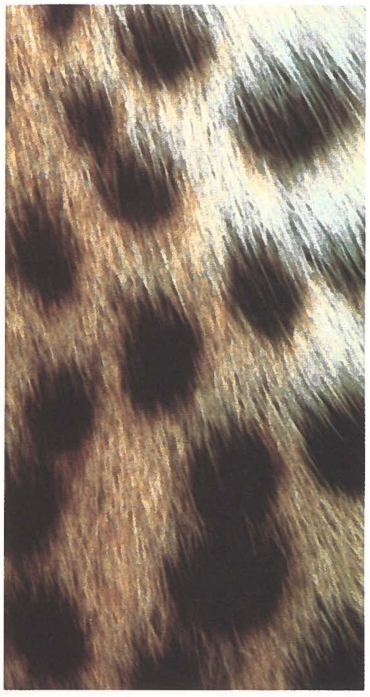
**Scientific synonyms:**

*Prionailurus bengalensis*

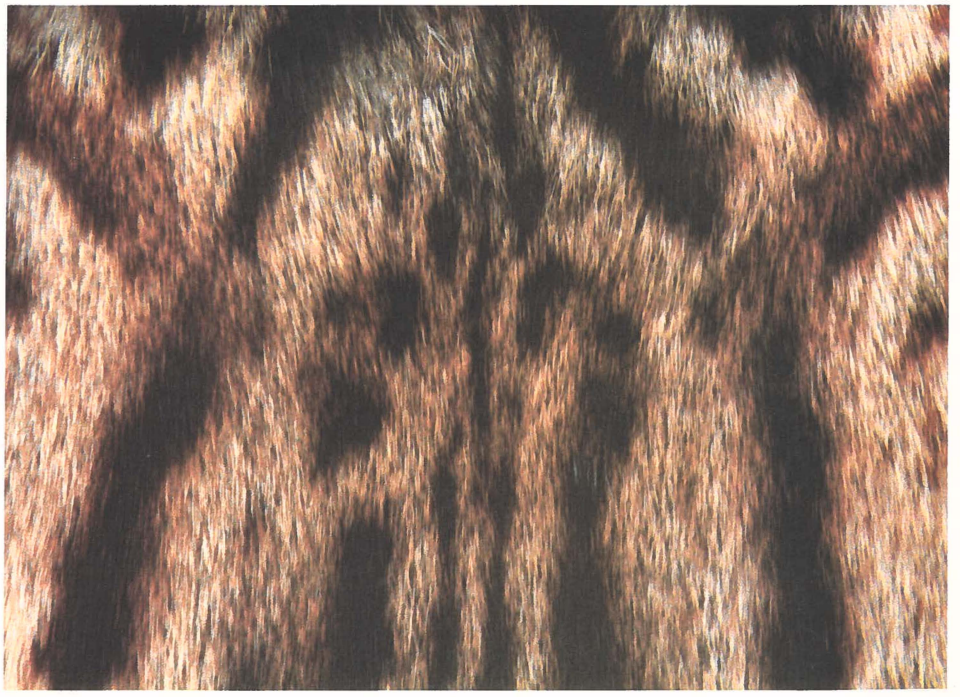
*Felis bengalensis bengalensis* = Appendix I, all other subspecies = Appendix II



① *Felis bengalensis chinensis*



② Detail ca. 1:1



③



④

Photos: ① ④ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft,
② ③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis caracal

Schreber, 1776

**Common names:**

E Caracal Lynx
F Caracal
R Каракал
S Caracal
Lince de las estepas
D Karakal
Wüstenluchs
I Caracal
Lince del deserto

**Trade names:**

none

**Scientific synonyms:**

*Caracal caracal*
*Lynx caracal*

Asian population = Appendix I
African population = Appendix II




① African caracal



② *Felis caracal,* Asiatic population (Appendix I), India

Photos: ① ② Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

# Felis silvestris f. catus

(Linné, 1758)

**Common names:**

E Domestic Cat
F Chat domestique
R Домашняя кошка
S Gato domestico
D Hauskatze
I Gatto domestico

**Trade names:**

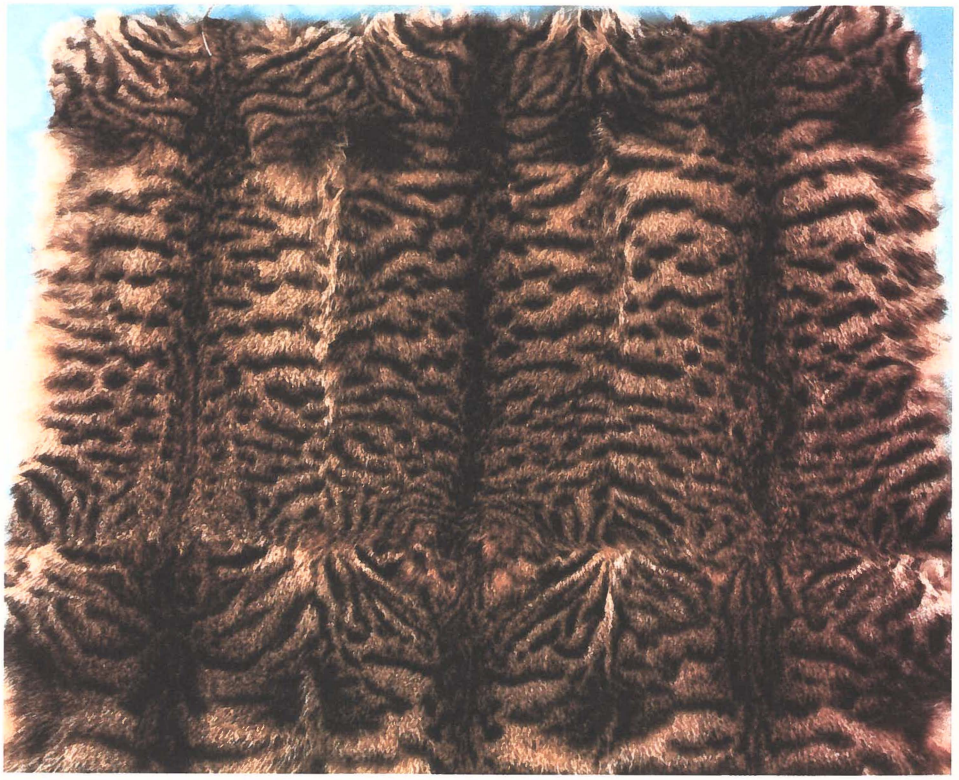
"Chinchillakatze"
"Cypernkatze"
"Feuerkatze"
"Genottekatze"
"Karthäuserkatze"
"Lyrenkatze"
"Marmorkatze"
"Müllerkatze"
"Räderkatze"
"Scheckenkatze"
"Siamkatze"
"Tigerkatze"

**Scientific synonyms:**

*Felis catus*



① left: "Räderkatze" right: "Cypernkatze"



② plate made from "Cypernkatzen"

Photos: ① ② Mickey Bohnacker
Submitted by the Management Authority of Switzerland

Code F-112.007.001.006
1983 (1)

# Felis chaus

Güldenstaedt, 1776

**Common names:**

E Jungle Cat
F Chat de jungle
R Камышовый кот
Хаус
S Gato de la jungla
Gato de los pantanos
D Rohrkatze
Sumpfluchs
I Gatto della giungla
Lince delle paludi

**Trade names:**

"Samacha"
"Dschungelkatze"
"Holzkatze"

**Scientific synonyms:**

*Chaus chaus*




①



②

Detail ca. 1:1



③ Design: Albrecht, Frankfurt, FR Germany

Photos: ① ③ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft,
② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis colocolo

Molina, 1810

**Common names:**

E Molina's Guiana Cat
Pampas Cat
F Chat des pampas
R Пампасская кошка
S Gato de los pajonales
Gato montés
Gato pajero
Osio
D Pampaskatze
I Gatto delle pampas

**Trade names:**

"Pajonal Cat"
"Südamerik. Luchskatze"

**Scientific synonyms:**

*Lynchailurus pajeros*




①



② Design: Rosenberg und Lenhart Frankfurt, FR Germany



③

Photos: ① ② ③ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

# Felis concolor

Linné, 1771

**Common names:**

E Cougar
Puma
F Puma
R Пума
S León americano
León bayo
Onza bermeja
Puma
D Puma
Silberlöwe
I Leone argentato
Puma

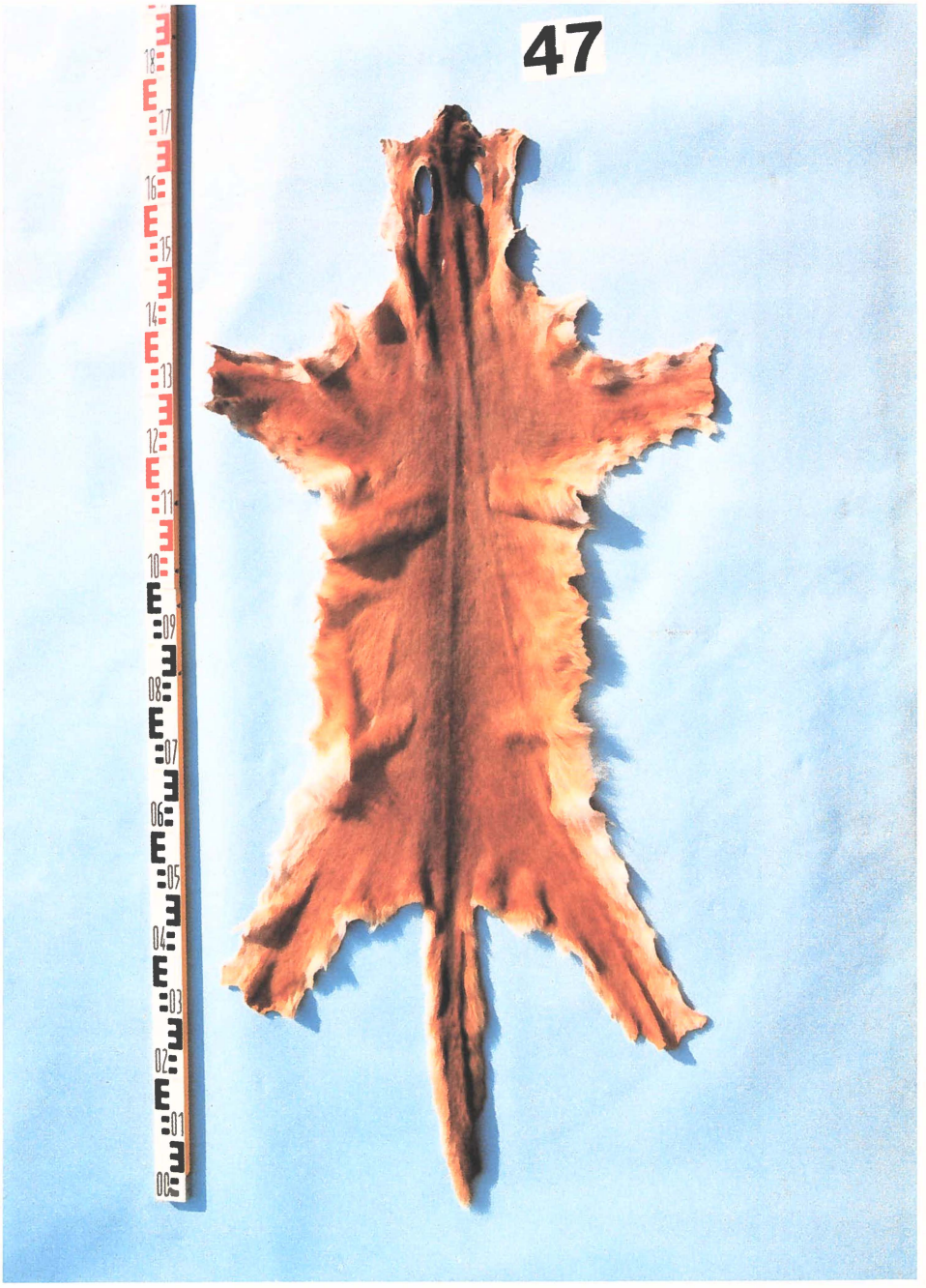
**Trade names:**

"Silver Lion"

**Scientific synonyms:**

*Puma concolor*

*Felis concolor coryi, costaricensis* and *cougar* = Appendix I
all other subspecies = Appendix II




①



②

Detail ca. 1:1



③ Felis concolor, stencilled
(Leopard pattern)

Photos: ①③④⑤Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
②Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis concolor





④ Design: Böttger



⑤ Stencilled, Cheetah pattern,
Collar: *Colobus* sp.
Design: Böttger

# Felis geoffroyi

D'Orbigny & Gervais, 1844



① Mendoza-type

② Chaco-type

**Common names:**

E Geoffroy's Cat
F Chat de Geoffroy
R Кошка жоффруа
S Gato de mato
Gato montés común
Mbaracaya
D Geoffroykatze
Kleinfleckkatze
Salzkatze
I Gatto di Geoffroy
Gatto di monte

**Trade names:**

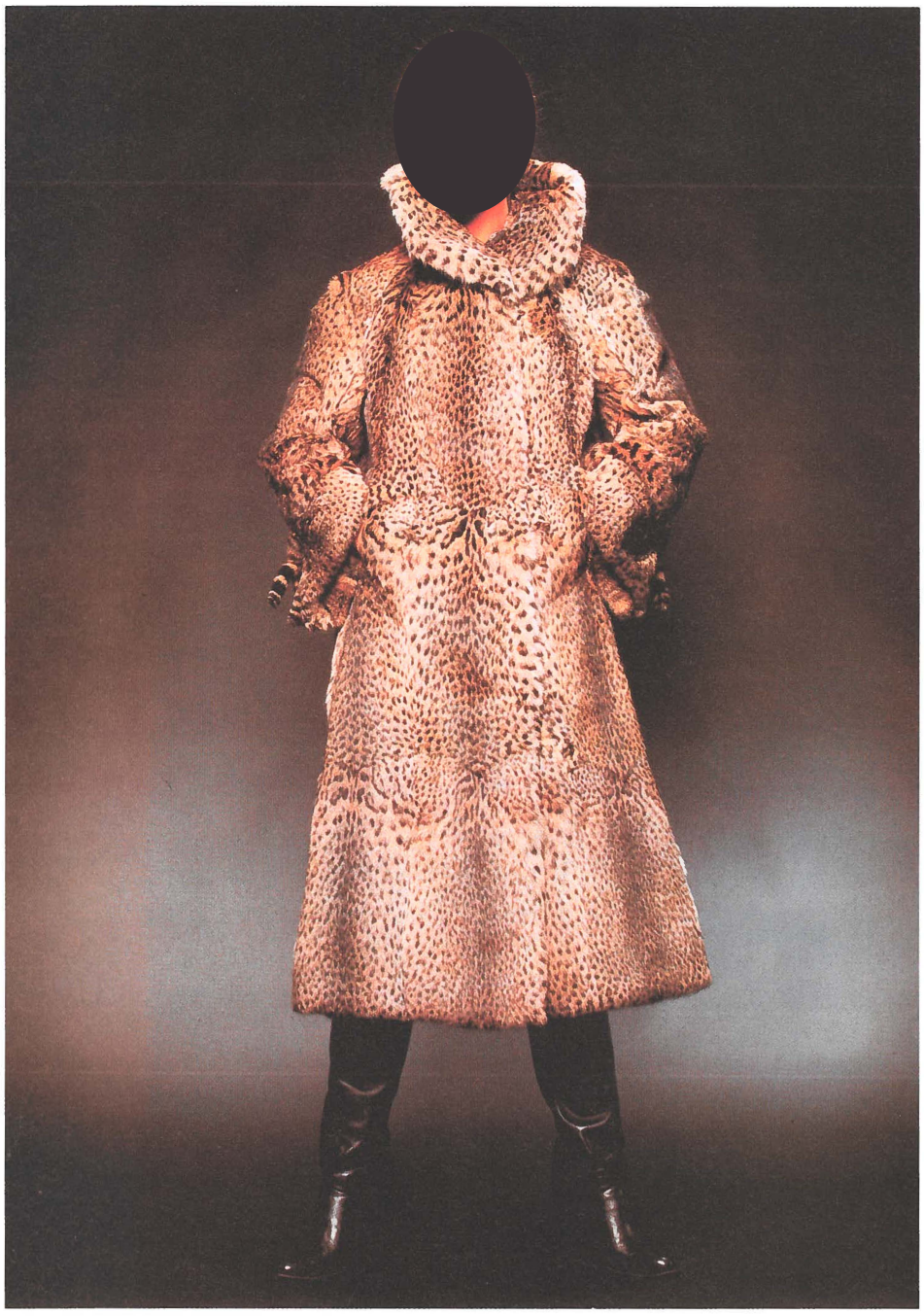
"Chacokatze"
"Mendozakatze"
"Südamerik. Wildkatze"
"Tigerkatze"

**Scientific synonyms:**

*Leopardus geoffroyi*
*Oncifelis geoffroyi*



③
Chaco-type
Detail ca. 1:1



④ Design: Ciufrida, Hamburg, FR Germany

Photos: ① ② Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
③ Peter Dollinger, Berne, ④ by courtesy firm Ciufrida, Hamburg
Submitted by the Management Authority of Switzerland

# Felis lynx

Linné, 1758




①

*Felis lynx canadensis*
Detail ca. 1:1
left: belly
right: back



②



③



④
Canadian lynx bellies
Design: Ralf Zeitler, Frankfurt,
FR Germany



⑤
Canadian lynx backs
Design: Ralf Zeitler, Frankfurt,
FR Germany

*Lynx canadensis* and *Lynx pardinus* are listed as separate species in "Mammal Species of the World"

Photos: ①④⑤ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
②③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis lynx



**Common names:**

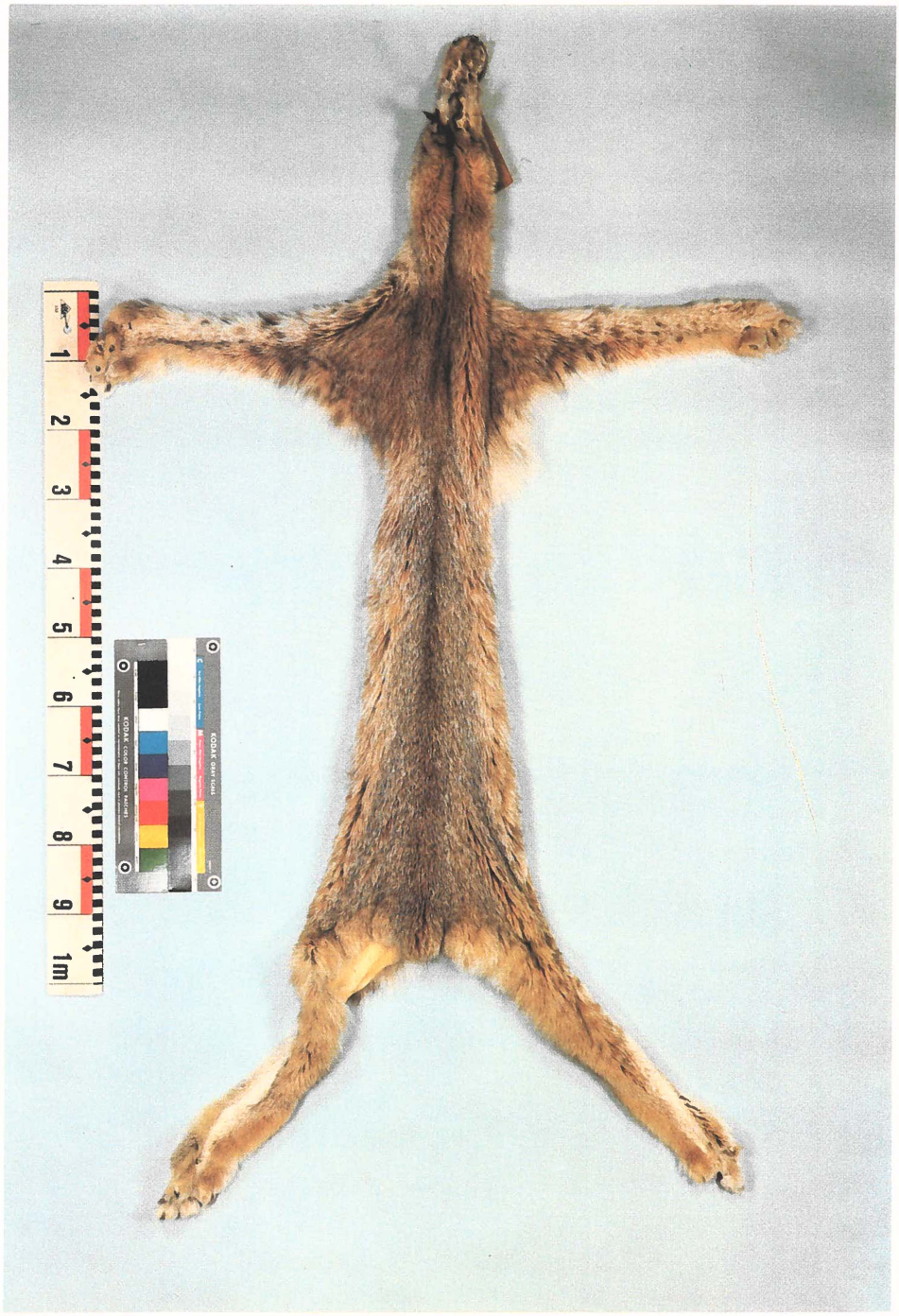
E Lynx
F Lynx
R Рысь
S Lince
D Luchs (Nordluchs, Pardelluchs, Kanadaluchs etc.)
I Lince

**Trade names:**

"Silberluchs"

**Scientific synonyms:**

*Lynx lynx*
*Lynx canadensis*
*Lynx pardellus*
*Lynx pardinus*



⑥
*Felis lynx isabellina*
Mongolia



⑦ *Felis lynx isabellina,* Mongolia
Design: Mayco, Zurich, Switzerland

Photos: ⑥W. Suter, Basel, ⑦ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

# Felis jacobita

Cornalia, 1865

**Common names:**

E Mountain Cat
F Chat des Andes
R Андская кошка
S Chinchay
Gato andino
Gato lince
D Bergkatze
I Gatto delle Ande

**Trade names:**

none

**Scientific synonyms:**

*Oreailurus jacobita*
*Oncifelis colocolo*

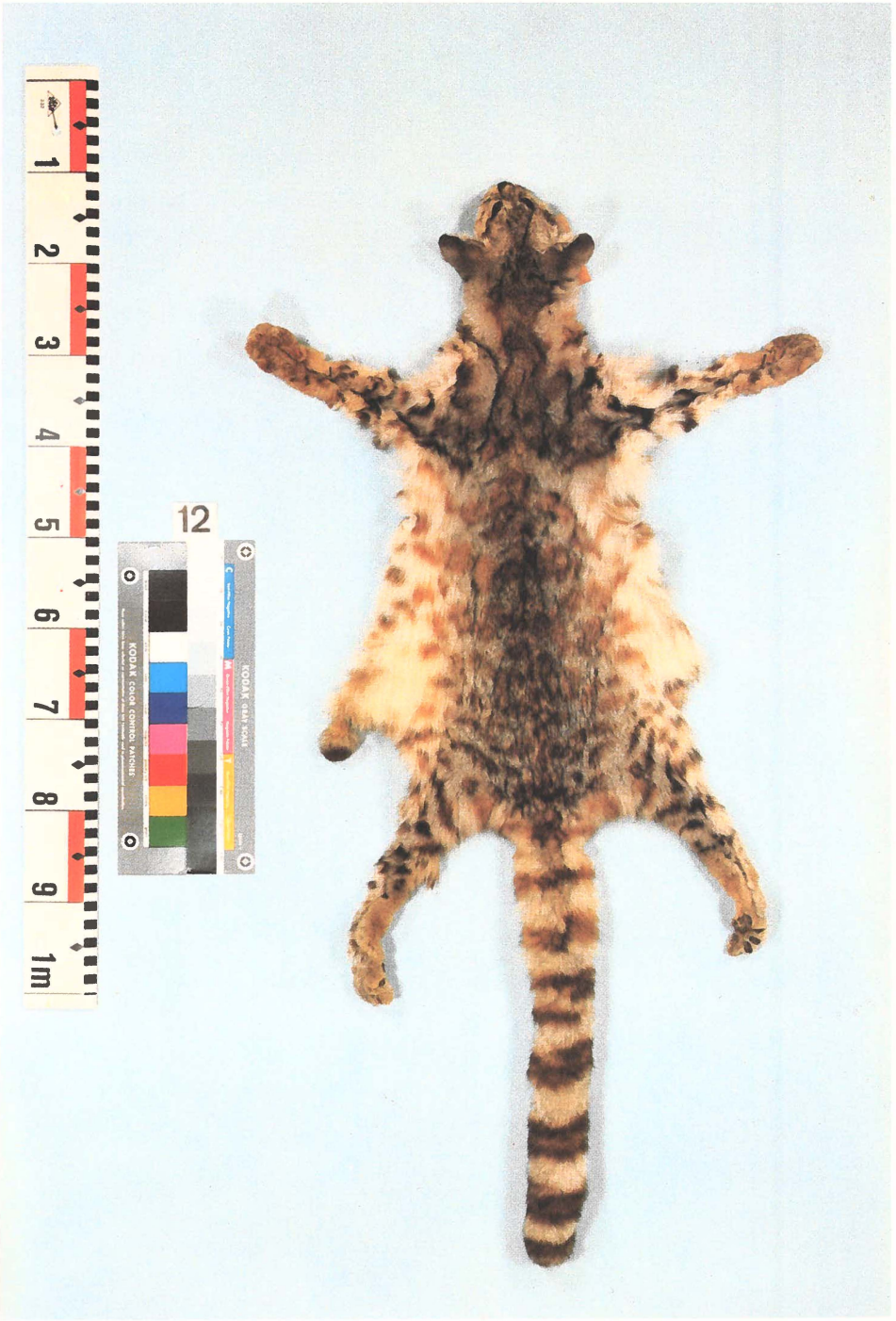



Photo: W. Suter, Basel
Submitted by the Management Authority of Switzerland

Code F-112.007.001.013
1983 (1)

# Felis manul

Pallas, 1776

**Common names:**

E Manul
Pallas Cat
F Chat manul
R Манул
S Gato de Pallas
Gato manul
D Manul
I Gatto di Pallas
Manul

**Trade names:**

none

**Scientific synonyms:**

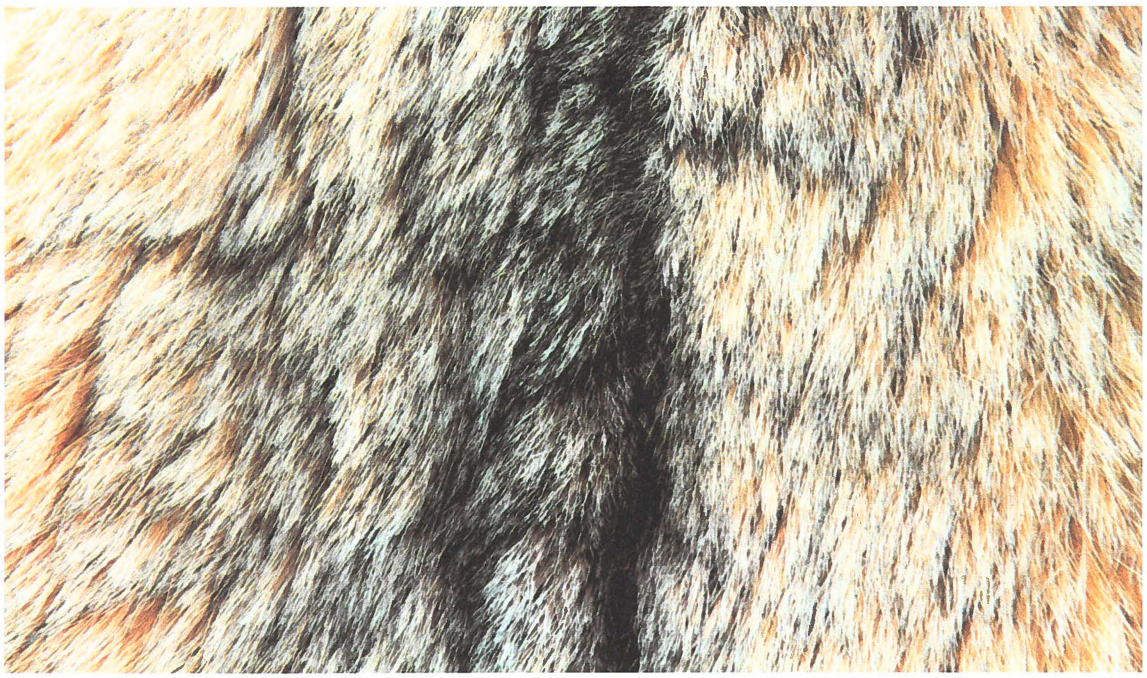
*Otocolobus manul*
*Trichaelurus manul*




①



①



② Details ca. 1:1

Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② ③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis pardalis

Linné, 1758

**Common names:**

E Ocelot
F Ocelot
R Оцелот
S Gato onza
Manigordo
Ocelotte
Tigrillo
Yagua-tirica
D Ozelot
I Gattopardo americano
Ocelotto

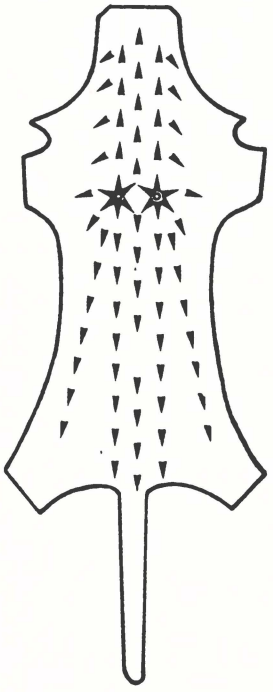
**Trade names:**

none

**Scientific synonyms:**

*Leopardus pardalis*

*Felis pardalis mearnsi* and *Felis pardalis mitis* = Appendix I, all other subspecies = Appendix II – but see A-112.007.001.020 under "Intraspecific variation"



The hairline on the neck is directed towards the crown, forming two whirls on the shoulder

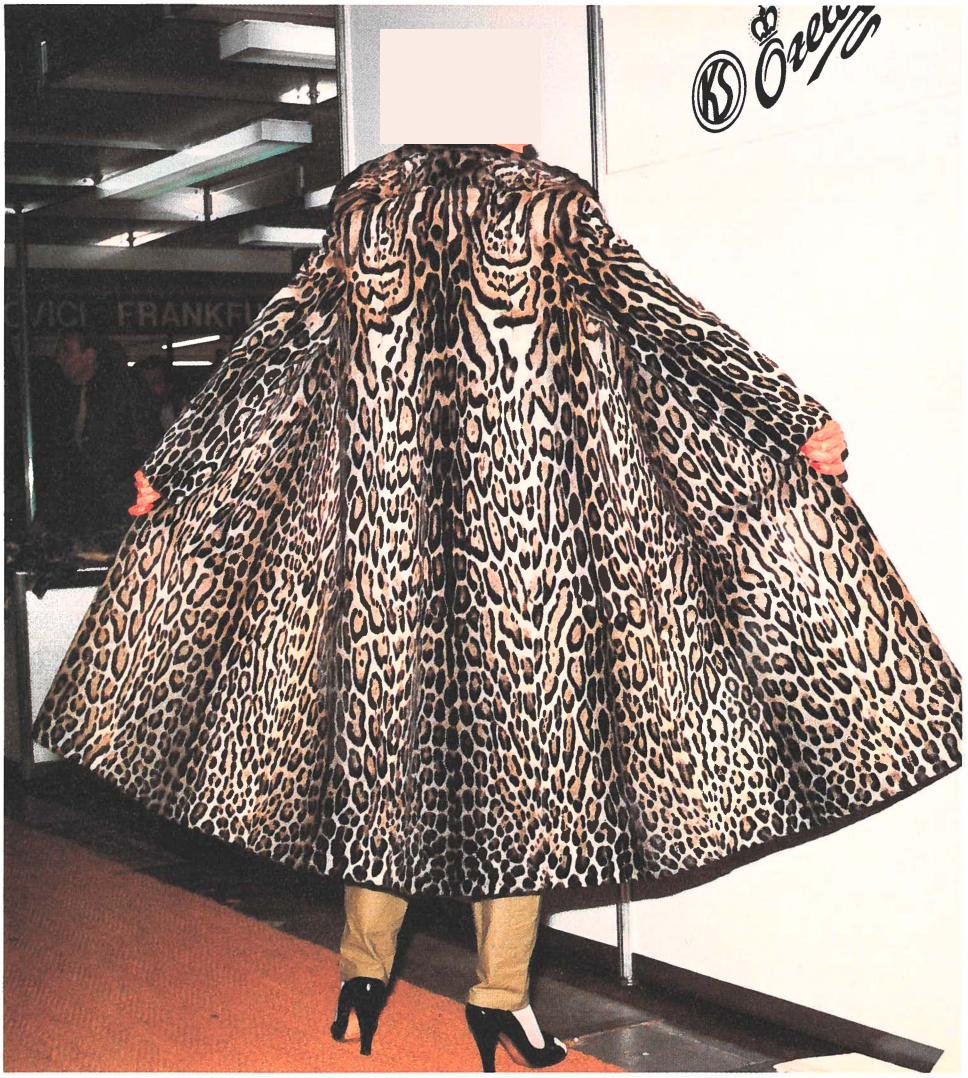


① Amazonian Ocelot



② Belize Ocelot

Detail ca. 1:1



③ Brazilian type
Design: Strozinsky, Bad Reichenhall, FR Germany

Photos: ①③ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
②Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis pardalis





④ Mexican ocelot

Code F-112.007.001.020
1983 (1)




⑤ Mexican type
Design: Strozinsky, Bad Reichenhall, FR Germany

Photos: ④ ⑤ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
⑥ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis pardalis





⑥ Variation in colour and pattern – all skins originate from the same lot, confiscated by the Swiss Federal Veterinary Office. "Origin" most probably Paraguay.

Code F-112.007.001.020
1983 (1)

# Felis rubiginosa

Geoffroy, 1831

**Common names:**

E Rusty-spotted Cat
S Gato rubiginosa, Gato rojizo
F Chat rougeâtre
D Rostkatze
I Gatto rugginoso

**Scientific synonyms:**

*Prionailurus rubiginosus*

Indian population = Appendix I
Sri Lanka population = Appendix II



① Skin from India (Bombay Natural History Society)



② Detail ca. 1:1



③ Skin of unknown origin

Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
②③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

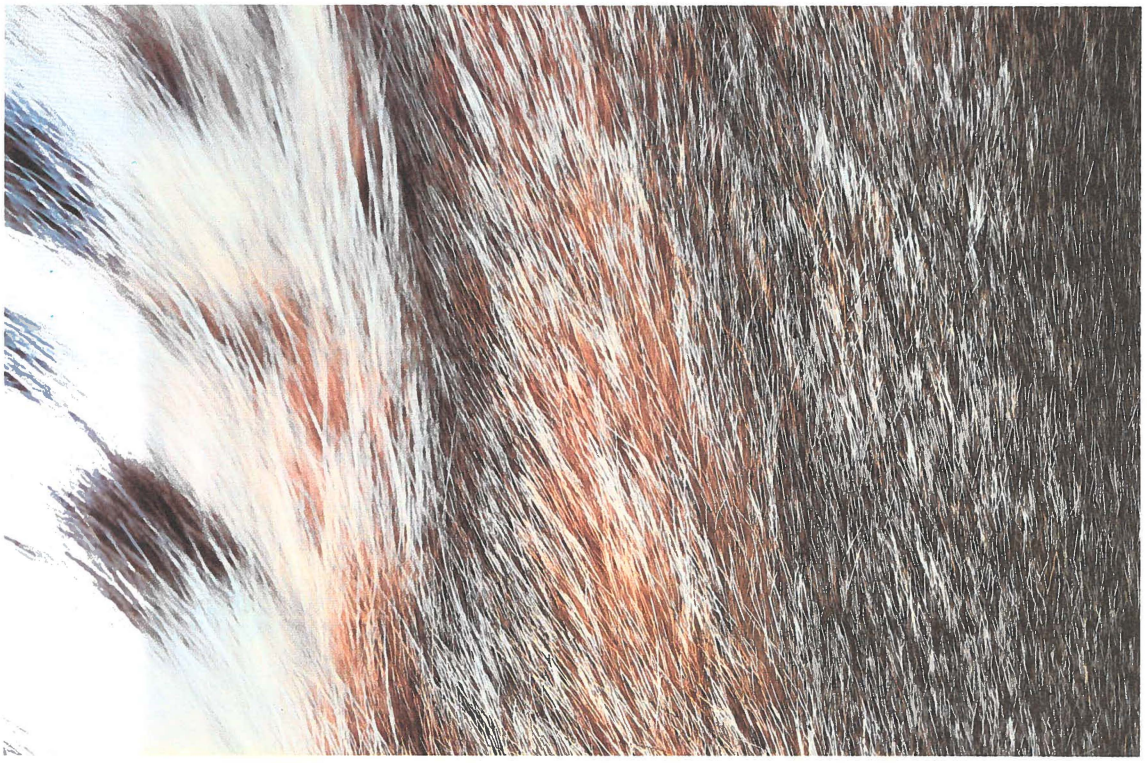
# Felis rufa





③
*Felis rufa escuinapae*
Mexican bobcat

Code F-112.007.001.024
1983 (1)



④ *Felis rufa escuinapae,* Mexican bobcat, detail ca. 1:1



⑤ *Felis rufa escuinapae,* Mexican bobcat, tail

Photos: ③④⑤ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis serval

Schreber, 1776

**Common names:**

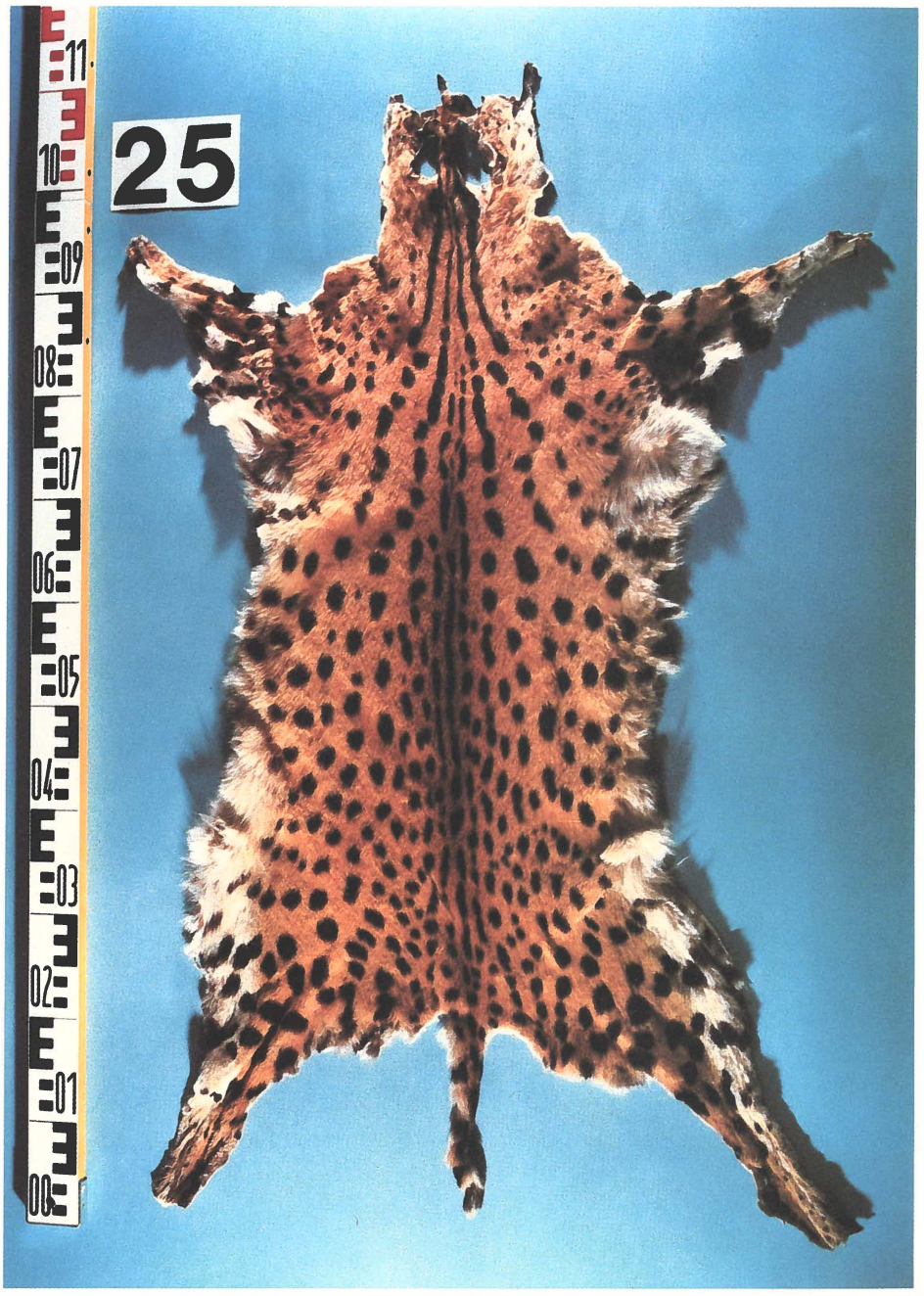
E Serval
F Serval
R Сервал
S Serval
D Serval
I (Gatto) Servale
Gattopardo africano

**Trade names:**

"Servalkatze"

**Scientific synonyms:**

*Leptailurus serval*




①



Detail ca. 1:1 ②




③




④

Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② Peter Dollinger, Berne, ③ ④ Canadian Wildlife Service, Ottawa
Submitted by the Management Authority of Switzerland

# Felis silvestris



**Common names:**

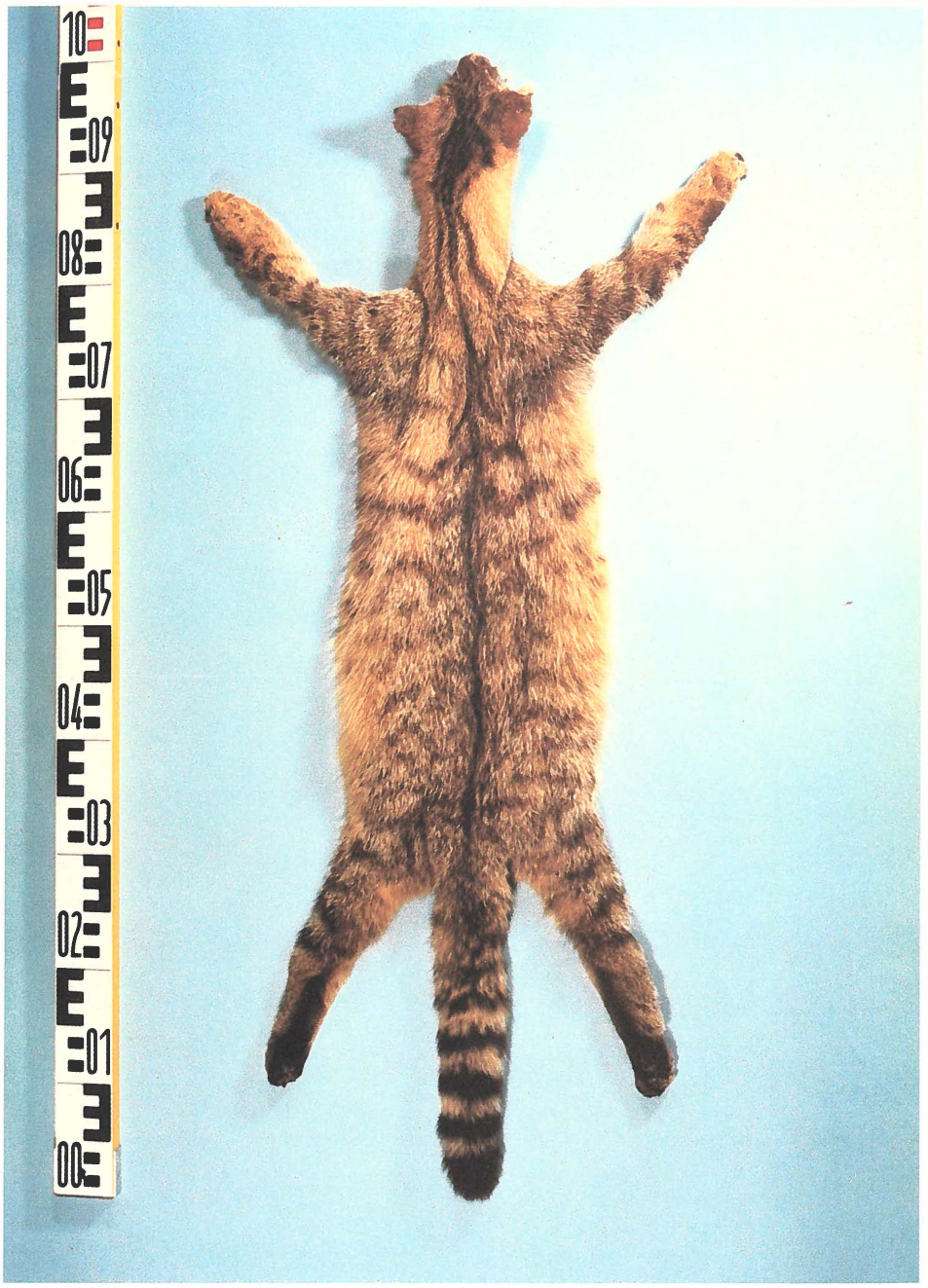
E Wild Cat
F Chat sauvage
R Дикая кошка
Лесной кот
S Gato montés
Gato silvestre
D Falbkatze
Wildkatze
I Gatto fulvo
Gatto ornato
Gatto selvatico

**Trade names:**

"Holzkatze"

**Scientific synonyms:**

*Felis lybica*
*Felis ornata*



⑥
*Felis silvestris silvestris*
Switzerland



⑦
Detail ca. 1:1

Code F-112.007.001.026
1983 (1)




⑧ *Felis silvestris silvestris*
Eastern Europe

Photos: ⑥ ⑧ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
⑦ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis temmincki

Vigors & Horsfield, 1827

**Common names:**

E Temminck's Golden Cat
F Chat doré d'Asie
R Кошка темминка
S Gato dorado asiático
D Asiatische Goldkatze
I Gatto di Temminck
Gatto dorato asiatico

**Trade names:**

none

**Scientific synonyms:**

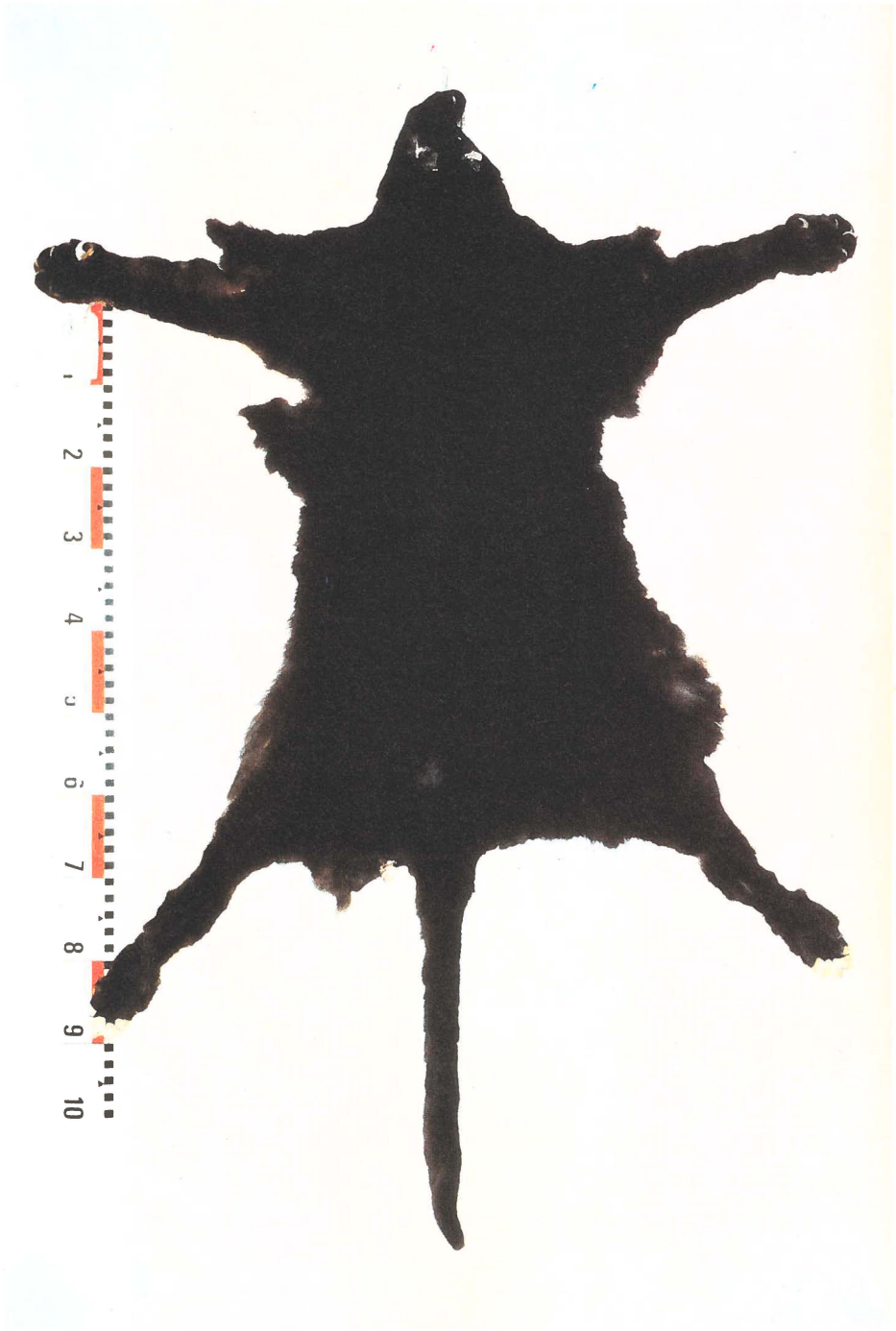
*Profelis temmincki*



The tail reaches to the shoulder. The hairline, beginning from the crown, is directed towards the Tail. No whirls on the shoulder.



① Normal colour phase (Sumatra)



② Black phase
(Sumatra)

Photos: ① ② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis tigrina

Schreber, 1775

**Common names:**

E Tiger Cat
F Chat tigre
R Онцилла
Тигровая кошка
S Caucel
Chiví
Gato tigre
Margay
Mbarakaya
Tigrillo
Tirica
D Zwergtigerkatze
I Gatto tigre
Tigrillo

**Trade names:**

"Leopard Cat"
"Mineiros"
"Orientales"
"Pintados"
"Bahiakatze"
"Cearakatze"
"Mato Grossokatze"
"Ozelotkatze"
"Südamerik. Wildkatze"

**Scientific synonyms:**

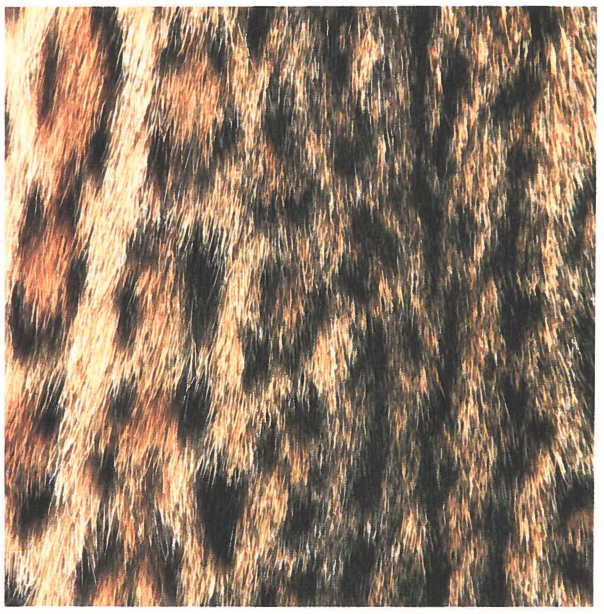
*Leopardus tigrinus*
*Felis pardinoides*

*Felis tigrina oncilla* = Appendix I,
all other subspecies = Appendix II
— but see under "Intraspecific variation"



① Mato Grosso-type

② Ceara-type



③ Detail ca. 1:1



④



⑤ Ceara-type
Rosenberg & Lenhart, Frankfurt,
FR Germany



⑥



⑦

Photos: ①②⑤⑥ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
③④Peter Dollinger, Berne, ⑦ by courtesy Vereinigte Hutfabriken, Cologne
Submitted by the Management Authority of Switzerland

# Felis wiedii

Schinz, 1821

**Common names:**

E Margay Cat
F Margay
R Американская кошка
S Caucel
Chiví
Cunaguaro
Gato montés
Huamburushu
Margay
Mbarakayá
Tigrillo
D Langschwanzkatze
I Margay

**Trade names:**

"Ocelot Cat"
"Baumozelot"
"Peluda"
"Peludo"

**Scientific synonyms:**

*Leopardus wiedii*



① Colombian Margay



② Brazilian Margay

*Felis wiedii nicaraguae* and *Felis wiedii salvinia* = Appendix I, all other subspecies = Appendix II – but see A-112.007.001.030 under „Intraspecific variation"





③ Rosenberg & Lenhart, Frankfurt, FR Germany ④

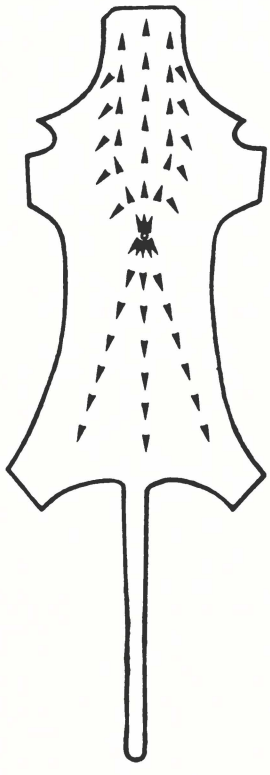
Photos: ①②③④ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
⑤ Canadian Wildlife Service, Ottawa, ⑥ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Felis wiedii






⑤



The hairline on the neck is directed towards the crown forming one whirl on the shoulder



⑥ Detail: Whirl

Code F-112.007.001.030
1983 (1)

APPENDIX II/I

# Felis yagouaroundi

Geoffroy, 1803

**Common names:**

E Eyra Cat
Jaguarondi
F Jaguarondi
R Ягуарунди
S Gato colorado
Gato moro
Léon breñero
Leoncillo
Mbarakaya-cira
Onza
Tigrillo
Yaguarundí
D Eyra
Jaguarundi
Wieselkatze
I Gatto moro
Yaguarondi

**Trade names:**

Silver Cat

**Scientific synonyms:**

*Herpailurus yaguarundi*
*Herpailurus eyra*

Several subspecies have been described but their validity is doubtful. Different colour phases, from foxy-red (formerly thought to be a separate species called "eyra") to black occur in the same area, and kittens of different colour are found in the same litter.

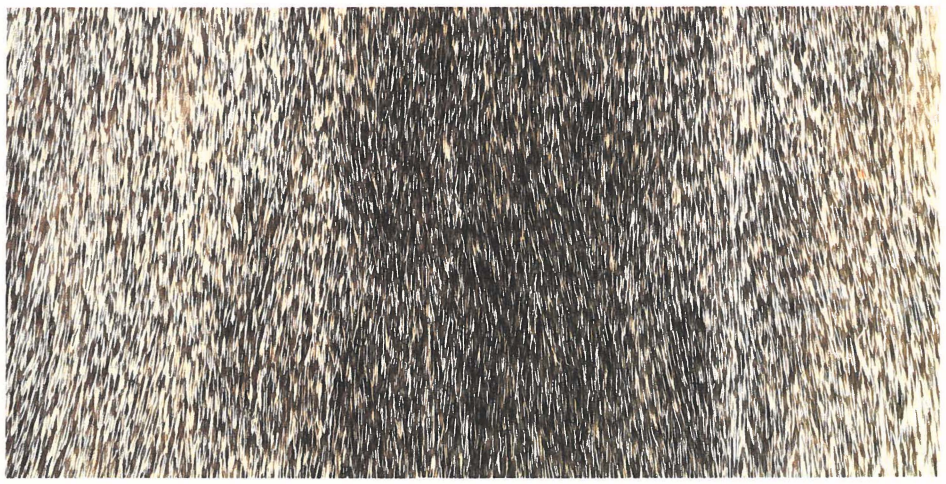
The following "subspecies" are listed in Appendix I:

*Felis yagouaroundi cacomitli*
*Felis yagouaroundi fossata*
*Felis yagouaroundi panamensis,*

i.e. the population from S Texas to Ecuador.



①



②

Code F-112.007.001.031
1983 (1)



③ Design: Levy, Berlin West

Photos: ① ③ Mickey Bohnacker, by courtesy Verband der deutschen Ruchwaren- und Pelzwirtschaft
② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Panthera leo

(Linné, 1758)

**Common names:**

E Lion
F Lion
R Лев
S León
D Löwe
I Leone

**Trade names:**

none

**Scientific synonyms:**

*Felis leo*
*Leo leo*

Indian Lion = *P.l. persica* = Appendix I
African Lion = Appendix II



Juvenile lion ①



Detail ca. 1:1 ②

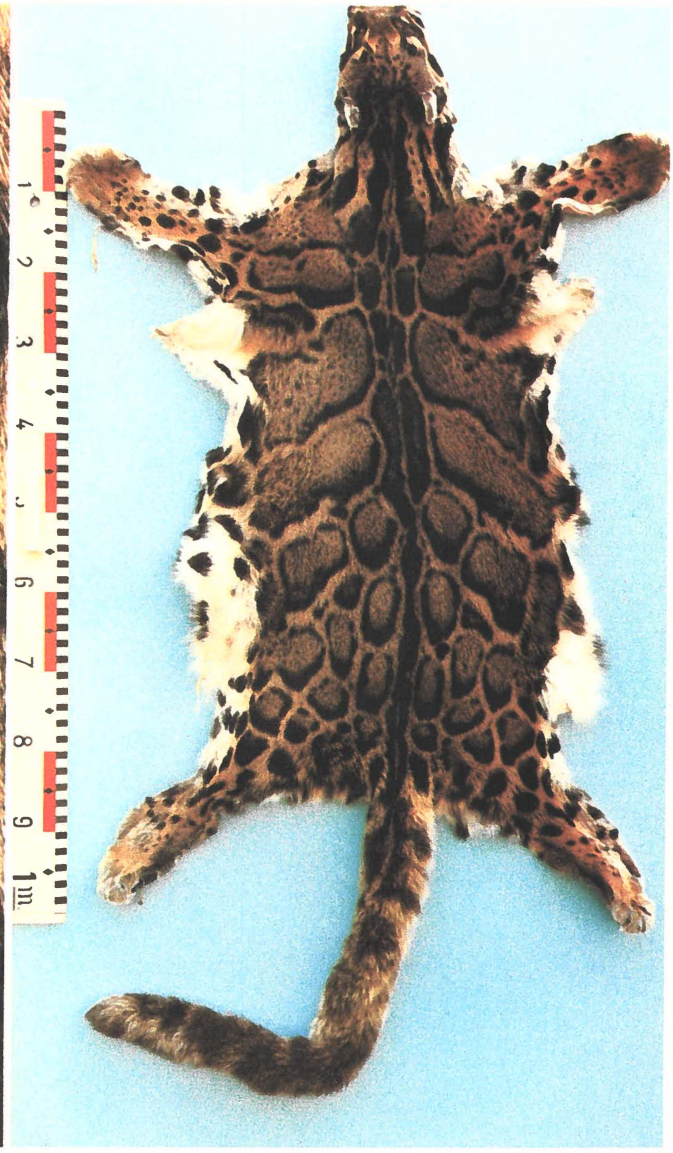
Photos: ① ② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

Code F-112.007.002.001
1983 (1)

# Neofelis nebulosa

(Griffith, 1821)





① Detail ca. 1:1 ②

**Common names:**

E Clouded Leopard
F Panthère longibande
Panthère nébuleuse
R Дымчатый леопард
S Pantera longibanda
Pantera nebulosa
Tigre longibando
D Nebelparder
I Pantera nebulosa

**Trade names:**

"Clouded Tiger"
"Nebelparder"
"Schildkrötenleopard"

**Scientific synonyms:**

*Felis nebulosa*
*Panthera nebulosa*



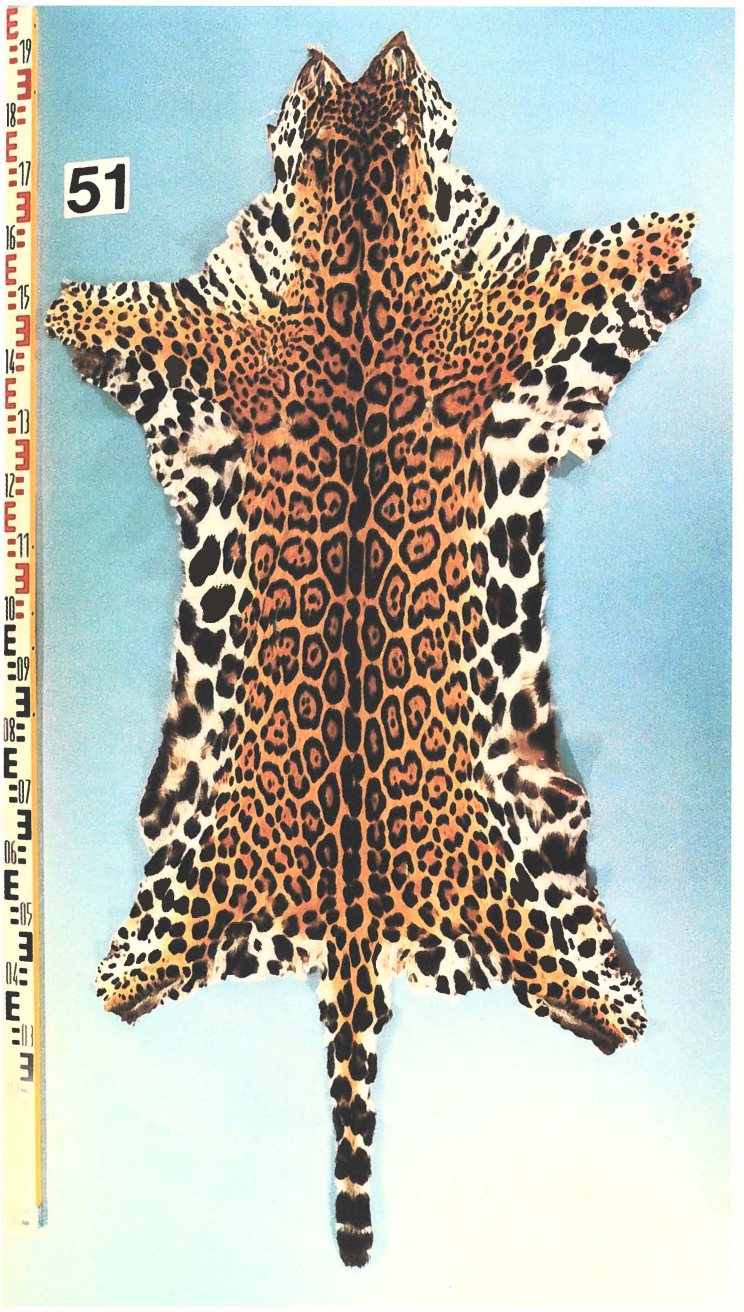
③
Design: Tigre Royal SA,
Geneva, Switzerland
(made from pre-convention
skins)

Photos: ① ② ③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Panthera onca

(Linné, 1758)




① Black phase ②

**Common names:**

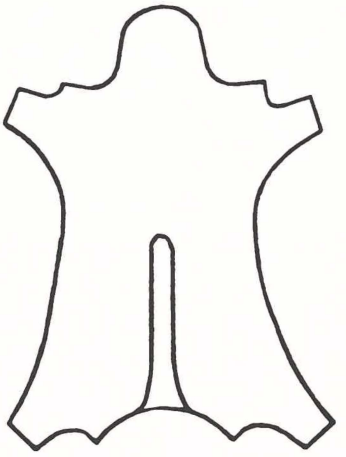
E Jaguar
F Jaguar
R Ягуар
S Jaguar
S Jaguar
Otorongo
Tigre americano
Yaguar
Yaguarete
D Jaguar
I Giaguaro

**Trade names:**

none

**Scientific synonyms:**

*Felis onca*



The tail reaches to the middle of the back only



③ Detail ca. 1:1, back



④ Detail ca. 1:1, belly

Photos: ①② Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
③④ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Panthera onca





©
Design: Tigre Royal SA,
Geneva, Switzerland
(made from pre-convention
skins)

Photo: © Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Panthera pardus

(Linné, 1758)

**Common names:**

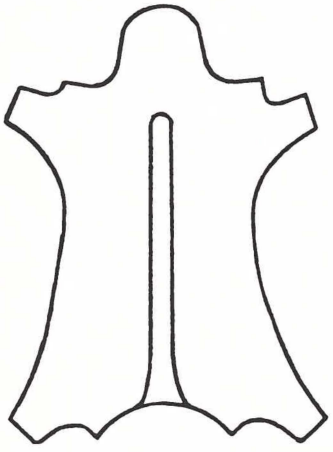
E Leopard
F Leopard
Panthère
R Леопард
Барс
S Leopardo
D Leopard
Panther
I Leopardo
Pantera

**Trade names:**

none

**Scientific synonyms:**

*Felis pardus*
*Leopardus pardus*



The tail reaches to the shoulder

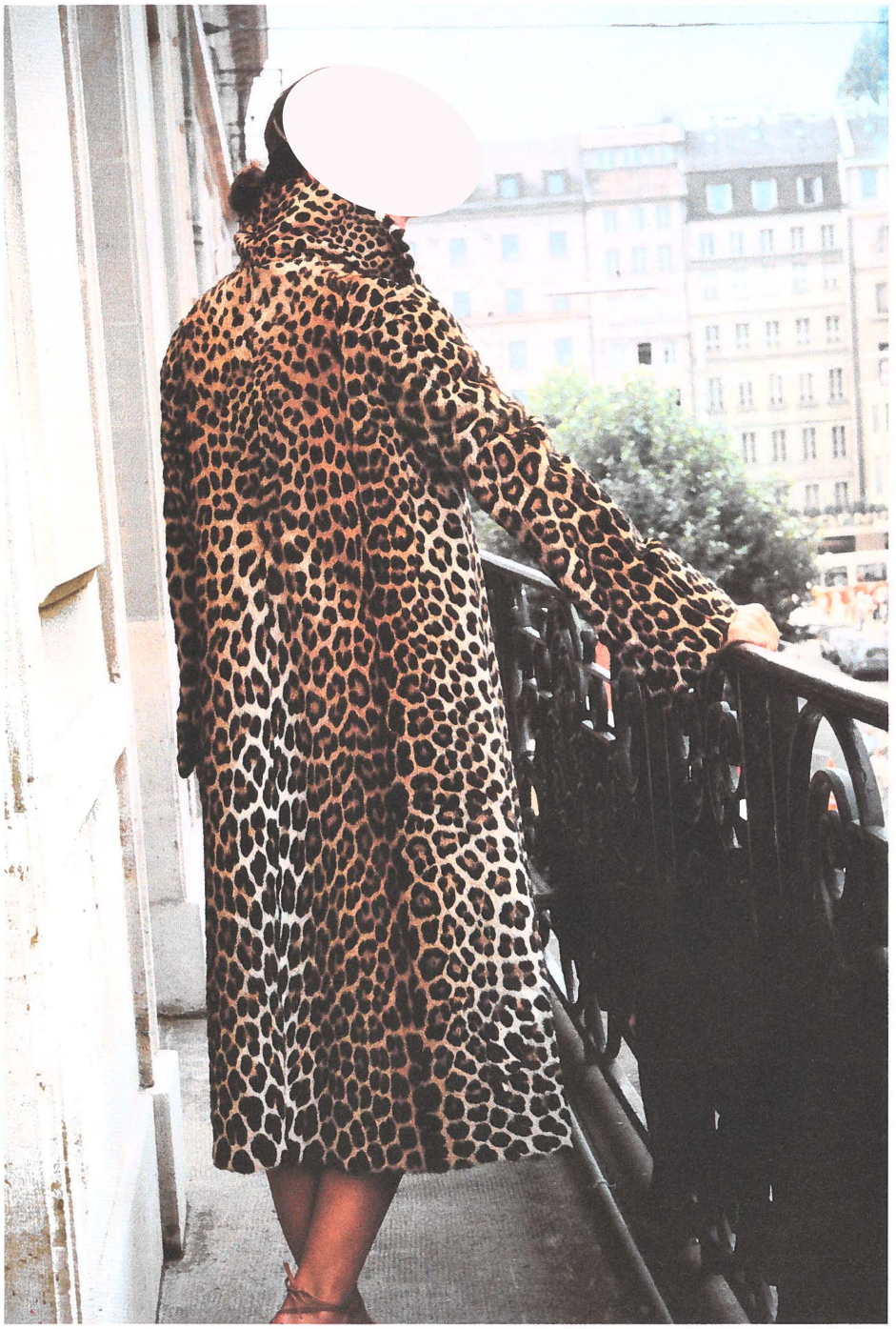
Zaire Leopard ①





Detail ca. 1:1 ②

Code F-112.007.002.004
1983 (1)



③
Somali leopard

Design: Tigre Royal SA,
Geneva, Switzerland
(made from pre-convention
skins)

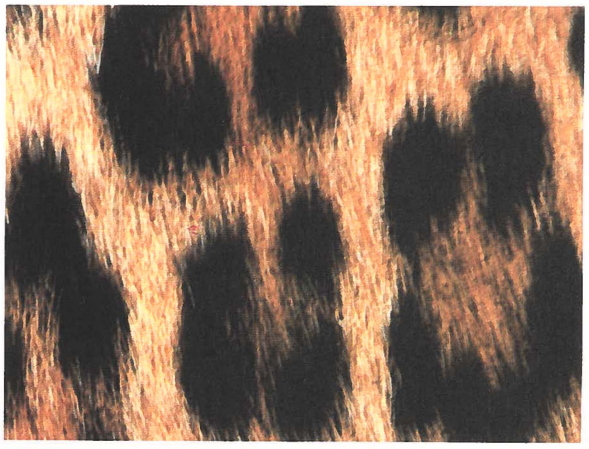
Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② ③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Panthera pardus





Indian Leopard ④

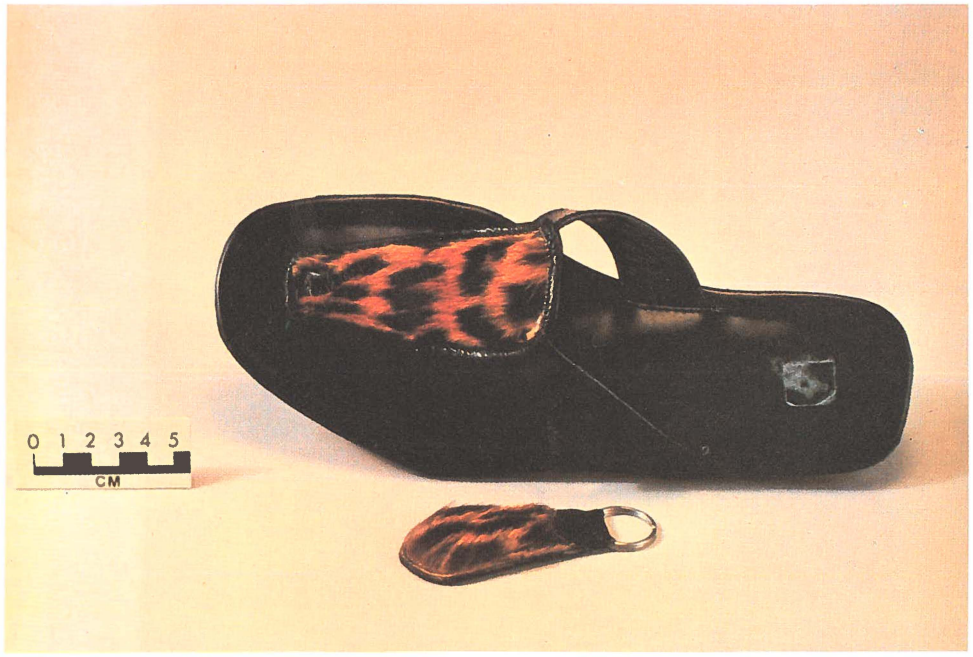


Detail ca. 1:1 ⑤

Code F-112.007.002.004
1983 (1)




⑥




⑦
*Panthera pardus* subsp.
handbag, shoe, and key holder

Photos: ④ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft,
⑤ Peter Dollinger, Berne, ⑥ ⑦ by courtesy Canadian Wildlife Service
Submitted by the Management Authority of Switzerland

# Panthera pardus






⑧ West African leopard

Photo: ⑧ Mickey Bohnacker, by courtesy Verband der Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

Code F-112.007.002.004
1983 (1)

# Panthera tigris

(Linné, 1758)

**Common names:**

E Tiger
F Tigre d'Asie
R Тигр
S Tigre
D Tiger
I Tigre

**Trade names:**

none

**Scientific synonyms:**

*Felis tigris*
*Tigris spp.*

*Panthera tigris altaica* = Appendix II
all other subspecies = Appendix I




① *Panthera tigris sumatrae*



②
*Panthera tigris* subsp.

Design: Tigre Royal SA,
Geneva, Switzerland
(made from pre-convention
skins)

Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Panthera uncia

(Schreber, 1775)

**Common names:**

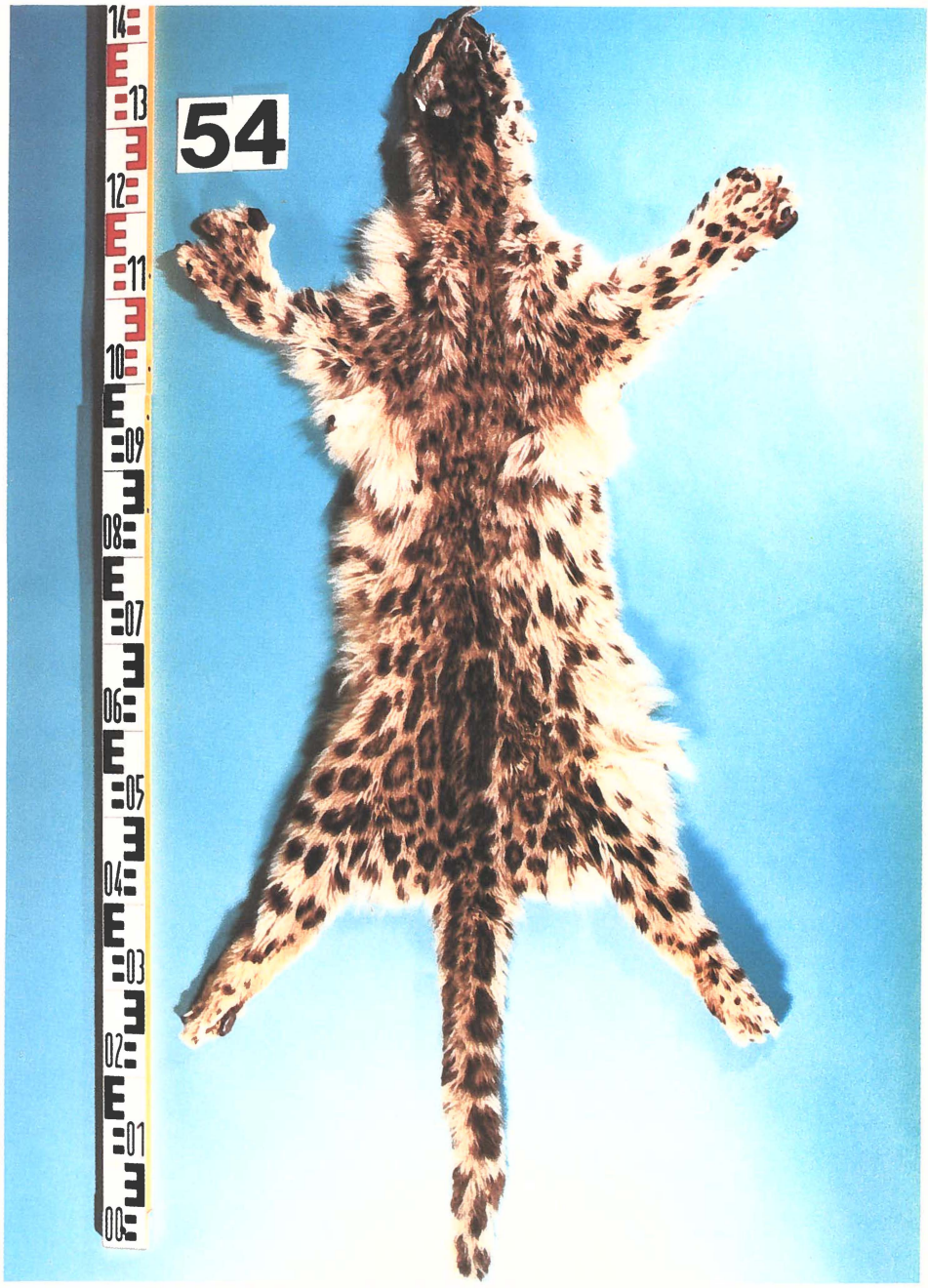
E Snow Leopard
F Panthère des neiges
R Снежный барс
Ирбис
S Leopard nival
Pantera de las nieves
D Irbis
Schneeleopard
I Irbis
Leopardo delle nevi

**Trade names:**

"Ounce"

**Scientific synonyms:**

*Uncia uncia*
*Felis uncia*




①



② Details ca. 1:1



③

Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② ③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Panthera uncia





④
Design: Tigre Royal SA, Geneva, Switzerland
(made from pre-convention skins)

Photo: ④ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

Code F-112.007.002.006
1983 (1)

# Acinonyx jubatus

(Schreber, 1776)

**Common names:**

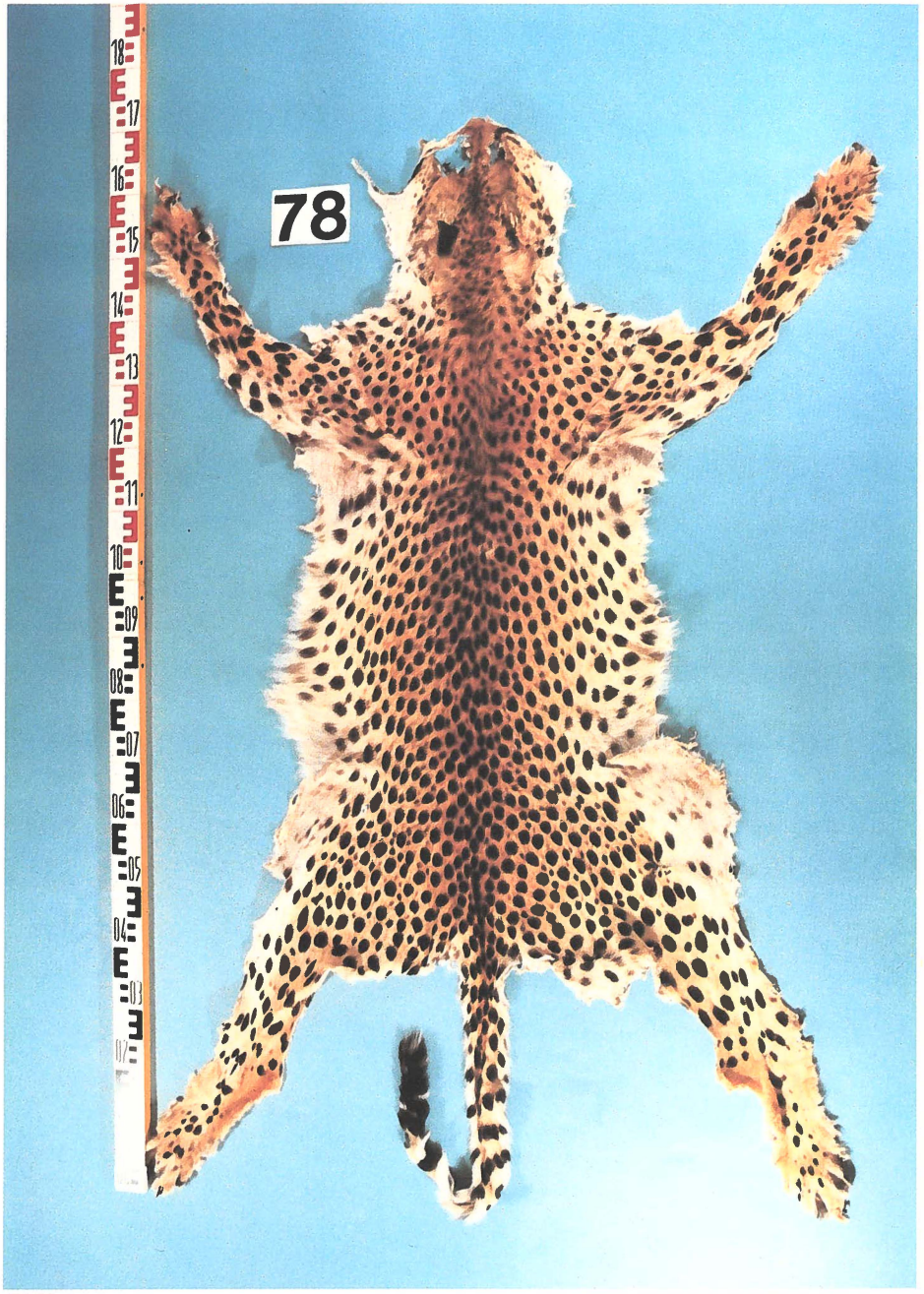
E Cheetah
F Guépard
R Гепард
Пардус
S Guepardo
D Gepard
I Ghepardo

**Trade names:**

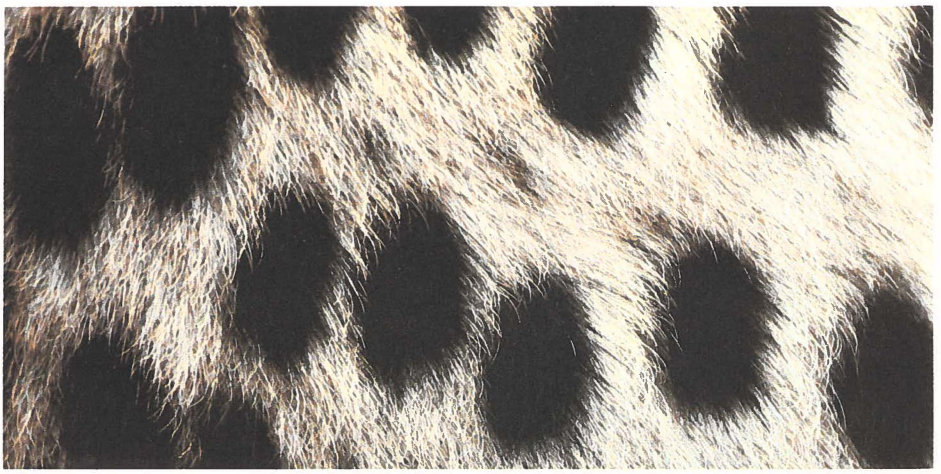
none

**Scientific synonyms:**

*Felis jubata*
*Felis venatica*
*Cynailurus*




①



Detail ca. 1:1 ②



③
Design: Tigre Royal SA,
Geneva, Switzerland
(made from pre-convention
skins)

Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② ③ Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# General Notes

Marine (pinniped) carnivores include the following families:

- Otariidae, with 14 living species;
- Odobenidae, with one living species;
- Phocidae, with 19 living species.

While the walrus skin is not commercially used, a number of the fur seal (Otariidae) and hair seal (Phocidae) species play – or at least played until recently – an important role in the fur trade. In former times, some of these species have been overexploited and have become almost extinct:

- Once common throughout the archipelago, the Galapagos fur seal *(Arctocephalus galapagoensis,* Appendix II) was nearly exterminated by sealing expeditions. A small colony was rediscovered in 1932/33. As a result of strict protection the population increased and reached 40'000 head in 1978.
- The Juan Fernandez fur seal *(Arctocephalus philippii,* Appendix II) originally numbered more than 3 million animals. At the end of the 18th century large scale sealing started at Mas Afuera Island. In 1824 the species had disappeared from most of its former range. For a long time it was believed to be extinct, until it was rediscovered in 1965. Under total legal protection the population increased and reached about 2500 head in 1978.
- Prior to commercial sealing, the Guadalupe fur seal *(Arctocephalus townsendi,* Appendix I) numbered between 20'000 and 200'000 animals. By 1928 it was believed to be extinct. However, a small population had survived the slaughter, and since 1950 the numbers of Guadalupe fur seals increased gradually. A population estimate in 1977 gave a total of 1300 to 1500 animals.

Currently the three species mentioned above are not exploited for their fur. This is different for the Northern fur seal *(Callorhinus ursinus,* not listed): This species may have numbered between 2.5 and 5 million head prior to commercial sealing. In 1909, only 125'000 remained on the Pribilof Islands. In 1911, exploitation became regulated by a Convention concluded between Japan, USSR, United Kingdom and the United States. This treaty was replaced by a new North Pacific Fur Seal Convention in 1957, with Canada, Japan, USSR and the USA being contracting parties. As a result of legal protection and proper management the populations increased dramatically and number between 1.8 and 2 million today, allowing an annual harvest of about 50'000 seals.

Other fur seal species commercially exploited today are the Southern fur seal *(Arctocephalus australis,* Appendix II) and the Cape fur seal *(Arctocephalus pusillus,* Appendix II). They have populations of 320'000 and 850'000 respectively. In the Cape fur seal somewhat less than 10 % of the population are harvested each year. In the Southern fur seal the annual take is considerably smaller.

The following trade data have been compiled by WTMU Cambridge:

| Year | Arctocephalus pusillus | | Arctocephalus australis | |
|---|---|---|---|---|
| | skins exported from South Africa | total of skins traded | skins exported from Urugay | total of skins traded |
| 1979 | 68'518 | 68'681 | 625 | 625 |
| 1980 | 36'772 | 104'960 | 258 | 258 |
| 1981 | 53'344 | 83'913 | 0 | 6 |
| 1982 | 103'733 | 159'826 | 330 | 335 |
| 1983 | 5'572 | 28'032 | 7 (illegal) | 18 |

The luxuriant pelt of the fur seals which is easily distinguishable from that of hair seals is processed by a very few, highly specialized companies, mainly in Norway and the USA. The processing includes either the plucking or the shearing of the guard hairs. Shorn fur seal skins are called "Lakoda" or "Lakunene". The underfur is very soft and dense (ca. 12'000 hairs per $cm^2$). Very often the skins are dyed. Colours include deep black and different tones of brown.

The phocid pinnipeds or hair seals produce a more versatile skin that is used either for fur or for leather. In seal pups the hair is relatively long and coarse. In subadults and adults the coat is short and bristly, a quality which makes hair seal pelts suitable also for the manufacture of articles such as shoes, boots, wallets, school bags etc.

Some of the hair seal species have also been heavily hunted since the 18th century, but the populations did not become so depleted as in some of the fur seals. Species which are at risk today are so because of other factors, such as environmental pollution, disturbance by tourists etc. None of the species listed in CITES Appendices has ever been hunted for its pelt.

The following hair seal species are commercially important:

| | | | |
|---|---|---|---|
| • Ringed seal | (Phoca hispida) | population | 6'000'000 |
| • Harp seal | (Phoca groenlandica) | population ca. | 2'500'000 |
| • Caspian seal | (Phoca caspica) | population ca. | 600'000 |
| • Harbour seal | (Phoca vitulina) | population ca. | 400'000 |
| • Larga seal | (Phoca largha) | population ca. | 400'000 |
| • Hooded seal | (Cystophora cristata) | population ca. | 365'000 |
| • Ribbon seal | (Phoca fasciata) | population ca. | 240'000 |

Detailed information on the numbers harvested and entering international trade is given by Barzdo and Caldwell (1982).

As a result of anti-sealing campaigns which have been mainly concerned with harp and hooded seal pups, not only have the pelts of pup seals, the so-called "white-coats", almost disappeared from international markets, but also the demand for other hair seal skins has declined drastically in recent years.

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| | |
|---|---|
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| Dixon, A.M. | (1984). The European Trade in Sealskins. Traffic Bull. VI, 54–65. |
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| Nilsson, G. et al. | (1980). Facts about Furs. Washington D.C. |



Text: Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Arctocephalus australis (Zimmermann, 1783)

**Common names:**

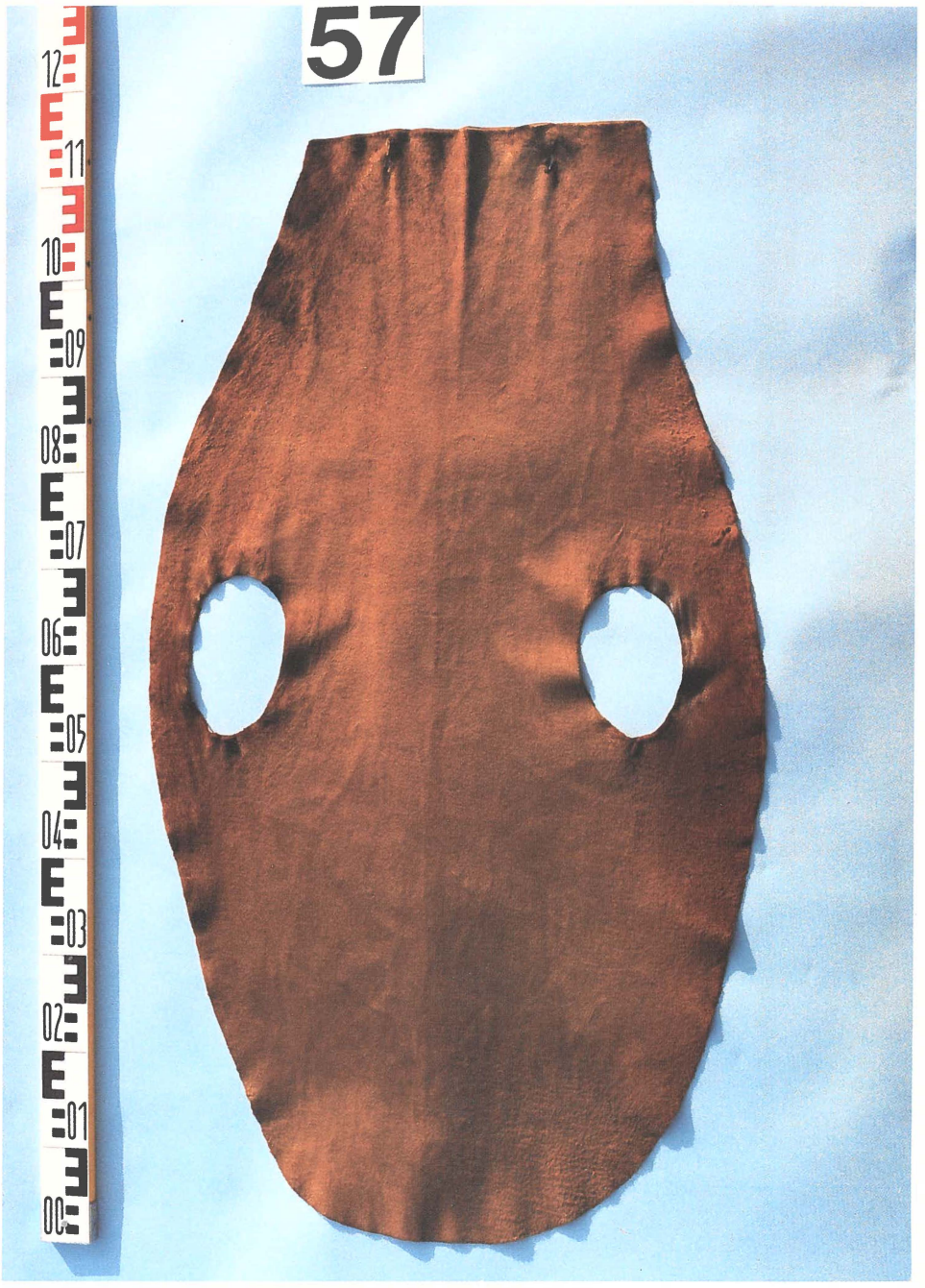
F Otarie à fourrure australe
R Южноамериканский морской котик
S Lobo de dos pelos
Lobo fino
Lobo marino
Oso marino
Otario
D Südamerikanischer Seebär
I Lontra del Capo
Lontra dell'Uruguay
Orso marino sudamericano

**Trade names:**

"Fur Seals"
"Loutres"
"Cape Horn Fur Seal"
"Lobos Fur Seal"
"Uruguay Fur Seal"
"Lakoda" (see also *A. pusillus)*
"Lobos-Seal"

**Scientific synonyms:**

*Arctocephalus gracilis*
and others




Lakoda ①



②

Photos: ① ② Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

# Arctocephalus pusillus

(Schreber, 1776)

**Common names:**

E South African Fur Seal
F Otarie à fourrure d'Afrique du Sud
R Южноафриканский морской котик
Капский морской котик
S Lobo fino de Africa del sur
D Südafrikanischer Seebär
Zwergseebär
I Arctocefalo del Sud-Africa

**Trade names:**

"Cape Fur Seal"
"Transveldt Fur Seal"
"Kapseal"
"Lakoda" (see also *A. australis)*
"Lakunene"

**Scientific synonyms:**

*Arctocephalus antarcticus*
*Arctocephalus ursinus*
includes *doriferus*
and *tasmanicus*




①




②
"Lakunene"

Photos: ①②Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

# Arctocephalus pusillus





③

Code F-113.001.001.006
1985 (1)



④ Design: Diamant



⑤ Design: Denhardt, Hamburg

Photos: ③ by courtesy firm Volkmann, Glashütten
④⑤ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

# General Notes

Whereas alpaca, llama and vicuna are mainly used for the production of wool, the guanaco provides a valuable fur which is processed into garments and covers. Only the fur of young guanacos, called "guanaquitos" enter international trade. This fur is soft and silky. It consists mainly of woolly underfur while the guard hairs are sparse and thin. It is characterized by reddish-brown upper parts and sharply contrasting under parts. Its wearing coefficient is 50 to 60%.

The number of guanaco skins entering international trade is quite substantial, but it should be noted that in addition a large number of skins is processed into plates or garments in the countries of origin.

| Species | 1979 | 1980 | 1981 | 1982 | 1983 | Main exporting countries |
|---|---|---|---|---|---|---|
| Lama guanicoe | 2'844 | 9'863 | 16'859 | 30'631 | 5'001 | Argentina, Paraguay |
| Vicugna vicugna | 75 | 0 | 0 | 0 | 0 | Peru |

Sometimes, guanaquito skins are shorn, but they are never dyed, as the designers use the contrasting natural colours to obtain special effects.

The following species are illustrated in this section:

F-119.004.002.001 Lama guanicoe
F-119.004.002.002 Vicugna vicugna

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Colour printing of the chapter on Camelidae fur skins has been sponsored by the Artenschutzkreis des Kürschnerhandwerks e.V. and the German Fur Trade Federation

# Lama guanicoe

(Muller, 1776)

**Common names:**

E Guanaco
F Guanaco
R Гуанако
S Guanaco
D Guanako
I Guanaco

**Trade names:**

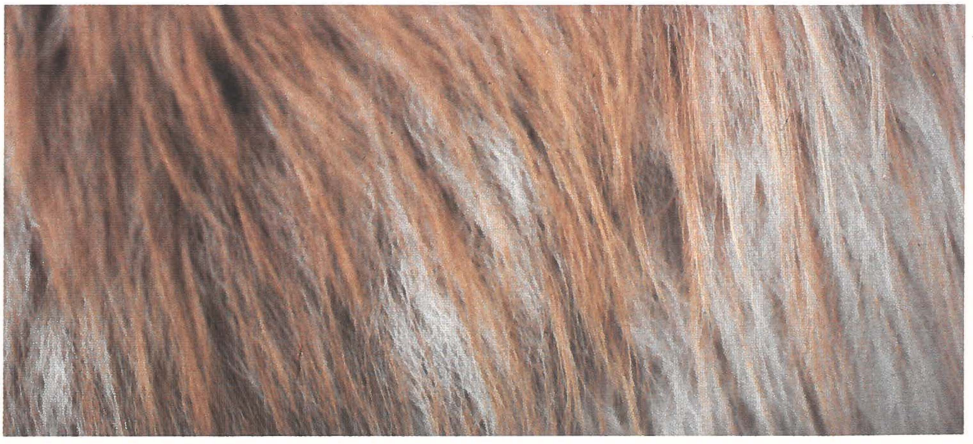
"Guanaquito"

**Scientific synonyms:**

*Camelus guanicoe*
*Camelus huanacus*
*Lama huanachus*
*Auchenia lama*
*Auchenia lonnbergi*



①



②

Detail ca. 1 : 1



③ Design: Rosenberg & Lenhart, Frankfurt, FR Germany

Photos: ① ③ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② Peter Dollinger, Berne
Submitted by the Management Authority of Switzerland

# Lama guanicoe





④ Cover made from shorn guanaquito skins
Design: Rosenberg & Lenhart, Frankfurt, FR Germany

Photos: ④ Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
Submitted by the Management Authority of Switzerland

Code F-119.004.002.001
1985 (1)

# Vicugna vicugna

(Molina, 1782)

**Common names:**

E Vicugna
Vicuna
F Vigogne
R Викунья
S Vicuña
D Vikunja
I Vigogna

**Trade names:**

none

**Scientific synonyms:**

*Camellus vicugna*
*Lama vicugna*



①



Detail ca. 1 : 1
from skin of very young animal

②

Photos: ① Mickey Bohnacker, by courtesy Verband der deutschen Rauchwaren- und Pelzwirtschaft
② Peter Dollinger, Berne

Submitted by the Management Authority of Switzerland

Code F-119.004.002.002
1985 (1)

# Pantholops hodgsonii

(Abel, 1826)

**Common names:**

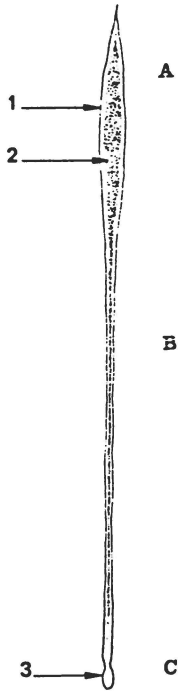
| | |
|---|---|
| engl.: | Tibetan Antelope, Chiru, Orongo Antelope |
| fr.: | Chiru, Antilope du Tibet |
| esp.: | Antílope tibetano |
| de.: | Tschiru, Tibetantilope |
| ital.: | Antilope tibetana |
| local: | Chiru, Orongo |

**Trade names:** Shahtoosh

The fur of mammals is divided into guard hairs and underwool. The guard hairs are thick and long and provide the general colour of the fur. The underwool is responsible for most of the insulation; the fibres of which it is composed are very numerous, fine and short.

The furs are processed in such a way that the final product consists mainly of guard hairs. The fabrics, on the other hand, are made of very fine hairs, and therefore the underwool is used.

Diagram of a guard hair; underwool fibres have no narrowing between the spatula and the stalk.




1 Cuticle (outer surface of hair)

2 Medulla (often absent from underwool fibres, always present on guard hairs)

3 Root

A Distal part (tip followed by the spatula)

B Stalk

C Proximal part

Although the Chiru is a member of the Bovidae family its guard hairs resemble those of Cervidae, notably in the cuticular structure.

The shawls are made of underwool fibres only, which are extremely fine. Their length varies between 15 and 25 mm, their diameter between 6,5 µ and 10 µ (rarely up to 11 µ). The diameter is regular, the mean being slightly under 10 µ. This diameter is a primary characteristic since it is one of the finest, if not the finest, among ungulates. However there may be individual variation in the diameter of the fibres, depending upon many factors, e.g. the health of the animal. Much experience is needed to be able to examine these fibres as they are difficult to distinguish simply by eye (their diameter cannot be appreciated by inexperienced people). Underwool fibres make up most of the fur on the ventral side of the animals, and they are also denser there. Another noticeable characteristic of underwool fibres is that the diameter is uniform for the total length of the hair, except for the tip, which is thinner and pointed; there is no thinning towards the root end. The underwool fibres from the back of the animal are pale grey, those of the underside are whitish; the colour can only be determined with a tuft, not with a single fibre.

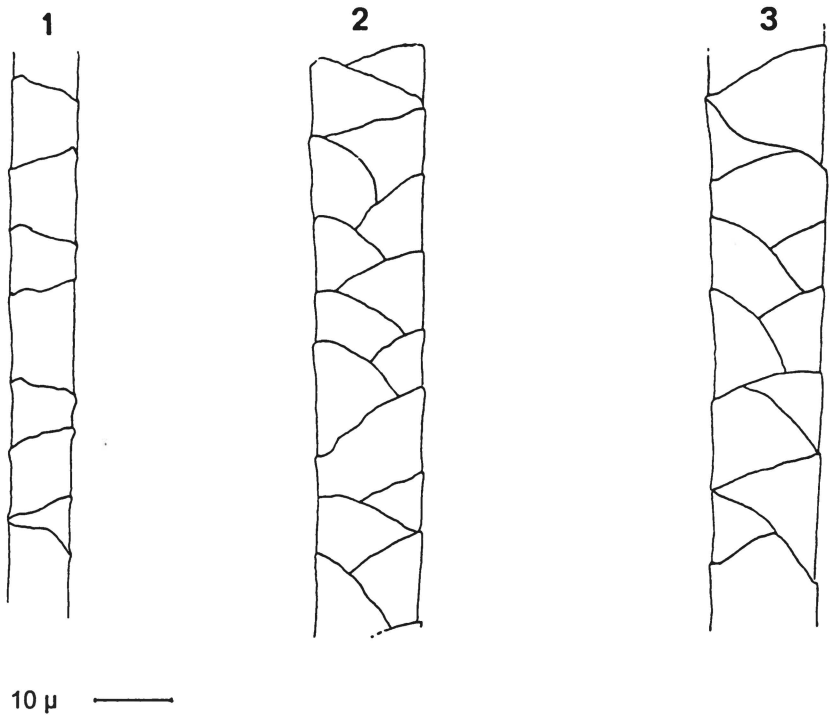
On fibres from manufactured products the root is always absent, slightly reducing their overall length. The total length of such fibres does not appear to exceed 20 mm.

Due to their extreme fineness the fibres should be examined closely, preferably under a microscope. The finest hairs are diagnostic for the species.

**Diagnosis:**

As on all mammal hairs (except for modified ones like spines) the hairs have scales on the surface (cuticle). This cuticular structure is characteristic of each large systematic group, since it has evolved together with the function it has to fulfil. In *Pantholops* there is only one row of cuticular scales, which are close to a coronal type (fig. 1). The underwool fibres may be slightly undulating, but never as pronounced as in wool or guard hairs of Cervidae.

In cross section the guard hairs of *Pantholops* have a characteristic ovoid or oval shape as opposed to the kidney shape in *Capra* species.




**Similar species:**

*Capra hircus*: This is the most similar species to *Pantholops*, but its underwool fibres are usually longer than 20 mm. Their diameter varies between 12 and 20 µ, but there may be considerable variation due to the degree of crossbreeding and depending on the farms the animals come from. Although hairs from Asian *Capra hircus* are thinner than those from European ones, they are still thicker than those from *Pantholops* are.

Furthermore, the hairs thin towards their proximal end in *Capra hircus* although this may not be visible in manufactured products. The cuticular scales are of the imbricated type and there are normally two rows (occasionally three) on underwool fibres. The scales are more regular in *Capra ibex* and tend to be smaller (fig. 2). Even the finest underwool fibres of *Capra hircus* have two rows of scales.

*Capra ibex*: The underwool fibres have a diameter of 13 to 20 µ and a length of between 20 and 35 mm. There may be two, sometimes three, rows of cuticular scales of the imbricated type (fig. 3).

*Capra falconeri*: The underwool fibres are very similar to those of *Capra hircus* in length, diameter and cuticular structure.

**Notes:**

Text: J. Cuisin, Muséum National d'Histoire Naturelle, Paris
Drawings: J. Cuisin
English translation: Jean-Pierre Biber, Basle, and John Caldwell, WCMC
Submitted by Direction Nationale des Enquêtes Douanières, Paris, and Corpo Forestale dello Stato Cervizio CITES, Italy

# Pantholops hodgsonii



When examining a thread of a shawl or of any other type of fabric it is not always possible to determine the species with a single hair (since a variation of 1 µ is not significant). However, the presence of a tuft containing hairs with a diameter of less than 10 µ is diagnostic for *Pantholops hodgsonii*.

The drawings are of "average" hairs, the most characteristic ones of the species.

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Code F-119.009.042.001
1995 (1)