

Bear Claws — Real and Fake



Bonnie C. Yates and Cookie Sims
Morphology Section -- Mammal Unit
National Fish & Wildlife Forensics Laboratory
Ashland, OR 97520

bonnie_yates@fws.gov cookie_sims@fws.gov

Introduction

- **PURPOSE:** To provide an introduction to mammal claw morphology and an identification aid for distinguishing genuine bear and cat claws from fakes.
- **INSTRUCTIONS:** This ID Note can be stored on the users' computer as a PowerPoint file and viewed onscreen or projected as a presentation. It can also be printed (in landscape orientation) and used as a hard copy.
- **CONDITIONS OF USE:** This ID Note may be freely distributed in its entirety, as long as acknowledgement of the source is made. The images may not be copied or distributed except in the context of the full ID Note.

Morphological Features of Genuine Mammal Claws

First, check the shape and color of the suspected object.

Genuine bear claws should be scimitar-shaped and silvery brown or blackish on top, fading to a lighter shade toward the underside of the claw. (See Fig. 1)

Genuine cat claws form almost a semi-circle, and are pale amber or off-white in color (See IDN M-01-1).

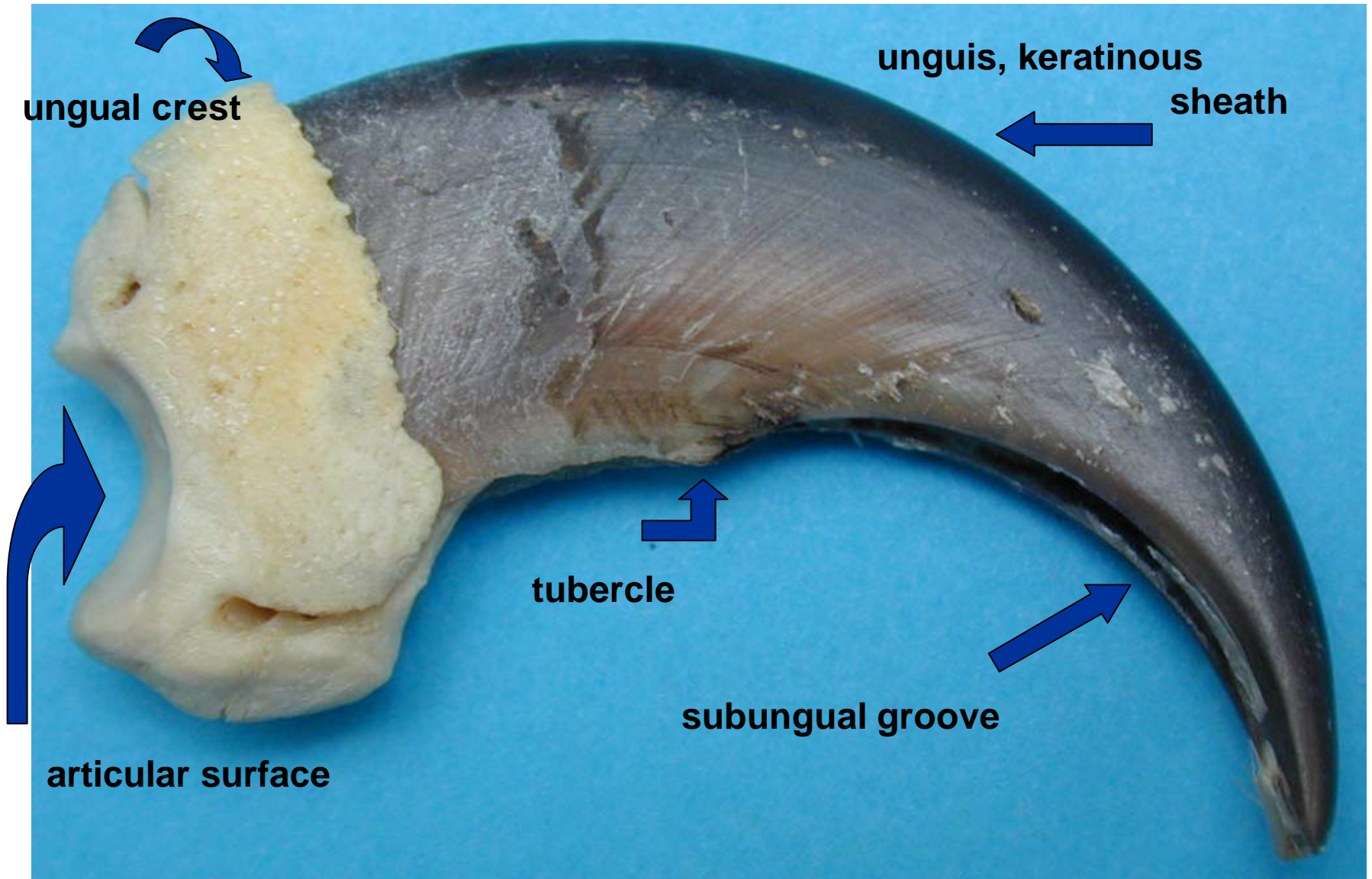


Fig. 1 Third phalanx, "Claw"

Start by examining the underside of the claw. If genuine (mammal) claw, there should be a deep, open channel formed by the free edges of the lower walls of the claw sheath (**unguis**).

The unguis covers the underlying bony projection that forms the claw's skeletal support. This channel is called the **subungual groove**.

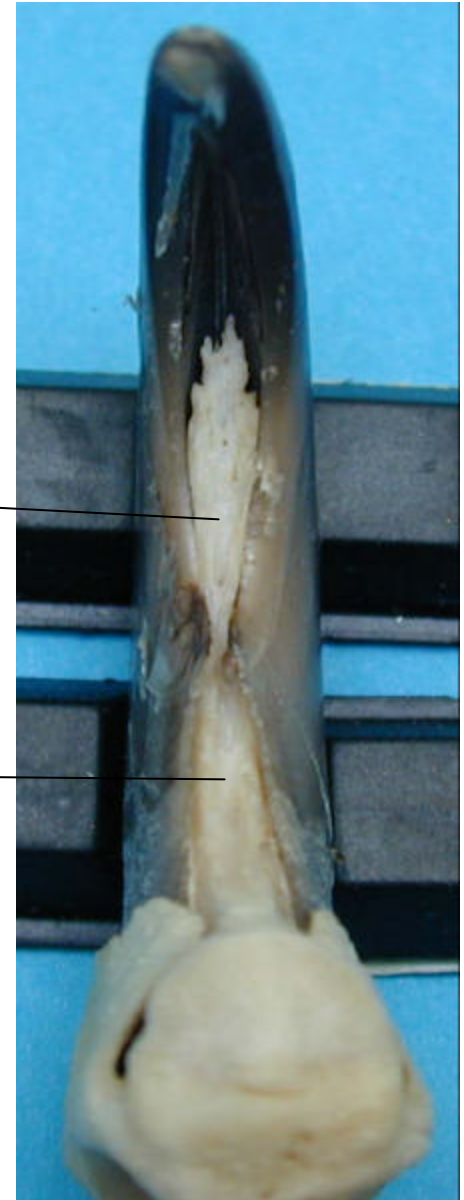


Fig. 2

Important:

The groove may be filled in with any manner of fill material — clay, dirt, glue, etc. Search for the free edges of the claw sheath on either side of the subungual groove.



Fig. 3a, b

Photos by B.W.Baker

Real claws exhibit fine structural ridges that follow the natural shape of the claw (Fig. 4). These fine ridges run lengthwise, but are not straight. They flow in a natural arc from under the bony collar (ungual crest) and fade out toward the tip.

Perpendicular to these fine ridges are tiny wrinkles that are actually growth rings in the claw keratin.

Bony collar

Fig. 4



Do not confuse these structural features with random scratches formed by accident or rough abrasion during manufacture or polishing.

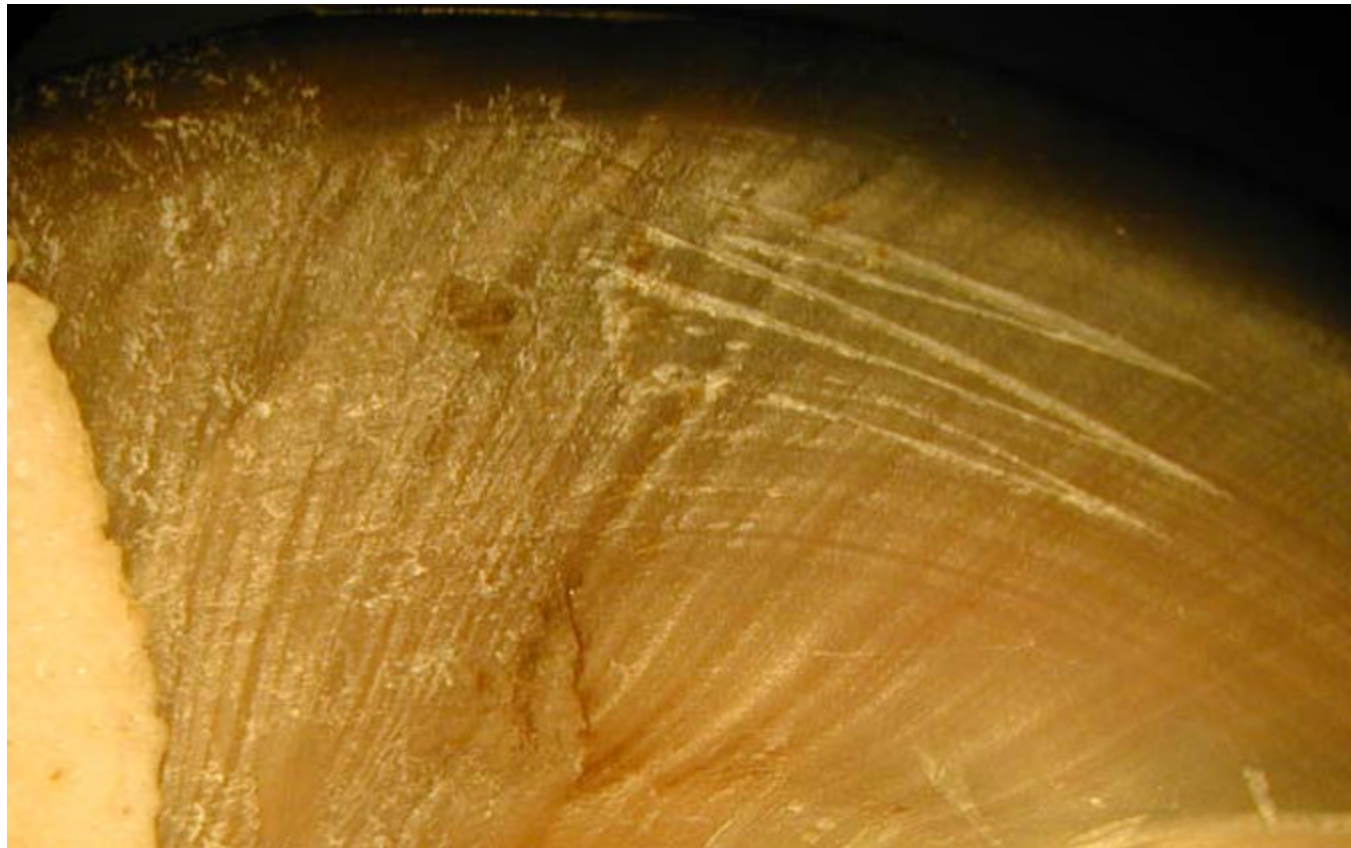


Fig. 5

Fake Claw Characteristics

The structural features noticeable in carved horn or hoof are completely different. Ridge features are really small, straight fibrils of keratin that ignore the arc and curvature of the claw's shape (Fig. 6). They will appear as parallel lines uniformly covering the sides of the "claw."



Fig. 6



Photos by B.W.Baker

In addition, the lower edges of a faked subungual groove will appear fat and squared off, not a natural, tapering edge.

Higher magnification will show the striations of the cutting tool used to square-off the edges of the fake claw.

Fig. 7

Fake claws made from another keratin source will either lack this groove, or will bear a clumsy attempt to scratch a groove or score a groove using a rotary hobby tool (Fig. 8). These phony grooves can be off-center and incompletely formed.



Fig. 8

Plastic or resin claws made from extremely fine molds and casts may accurately mimic these features. These claws must be painted to look genuine (Figs. 9 & 10).

Test for paint by applying a touch of acetone (fingernail polish remover) to see if the paint dissolves.

Fig. 9 Plastic bear claw



Fig. 10 Plastic eagle talon



The photographs in this IDNote were taken at natural size or low magnification (10 x to 15 x) and are not intended to replace actual comparison of real and fake claw objects.

A training exercise has been designed using actual objects so that this photo guide may serve as a memory device once the inspector has had the hands-on training.

If you have any doubt about an object's material or species source, please call or submit the object to the Lab. Sometimes additional instrumental or biochemical analyses are required for determination.

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