



## A Short Foot Work Overview. June 2009.

*A guide to quick efficient pedicures on Asian elephants.*

### Introduction.

The following information has been written because I feel there is a mixture of ideas on the way general foot care is performed with elephants in our zoos, therefore a structured implementation system would make it easier for a keeper learning how to do foot care and a not so experienced person teaching the foot care. The system I am suggesting allows for all people involved with elephant pedicures at a zoo or anywhere for that matter to follow the same techniques and application. This system does not cover damaged feet or any other abnormality.

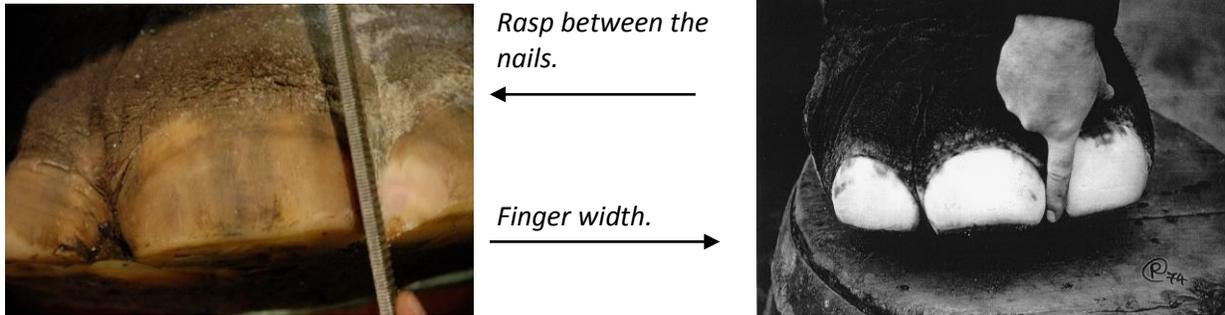
### From left to right.

This system in principle is a little unfair to people who are left handed and use left handed hoof trimming tools. However, most of the people who I work with, it seems, use right handed tools so this information is directed towards them. There are firstly a couple of identification issues I want to get out of the way before we start the guts of the info. We count the nails on an elephant from the inside out. Meaning, if we place our hand on the table left hand or right hand your thumb is number one digit, likewise with an Asian elephant front foot the little nail on the inside of the foot is nail number 1. Then counting 1, 2,3,4,5 the outside nail is number 5, unless by chance your elephant only has like an African 4 nails on the front, this is very rare but not out of the question. It makes it easier when you are talking to your colleagues or asking for advice on the internet to identify the nail you are talking about by a number, it becomes common dialogue basically. Very simply, if you start with the right foot, open up the gaps with your rasp between nails 2, 3 and 4 so there is sufficient space between these nails. The creation of space will allow your small knife to fit between these nails when you get to removal of the cuticle. After sufficient space has been achieved take your small knife and remove cuticle from left to right on the nail, from nail 5 and do this on all of the nails.



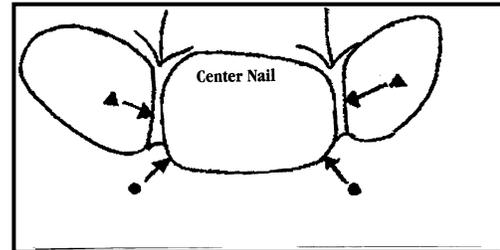
See in sections below under “space between the nails” and “attention to the cuticles” for more details concerning these areas.

## Space between the nails.



One finger width between nails 2, 3 and 4 is generally a satisfactory distances so the areas can drain and dry out completely. One thing to remember on a normal foot, a foot that doesn't have any irregularities is that nails 2 and 4 will crowd nail 3 the center nail so removal of most nail will generally be focused on those areas on 2 and 4 closest to nail 3.

The diagram to the right indicates two things one the little triangle show the growth of nails 2 & 4 on either front foot in towards nail 3 the center nail and the small black dot is a reminder not to take too much of the side of the nails with your rasps when creating space and fine filing the nails.



## Attention to the cuticles.

The cuticles are the most sensitive area of the feet and need special understanding and attention right from the start. The trimming of the cuticles is in my experience with all the elephant that I have interfaced over the years is the area of pedicures where elephants get hurt



the most. So, having said that we must pay extra attention to our technique and implementation when operating in this area particularly in Protected Contact, because the elephant will lose confidence and either walk away and not come back or far worst, start to become aggressive and lash out during sessions. A very sharp and thin knife is the key to this procedure because the cuticle must be removed without sagging or pulling on the cuticle. The other important aspect to keep in mind when trimming cuticles

keep the foot moist with water not oil, and goes with saying try not to cut too deep, there is an

area when trimming the cuticle that lies just above the blood and nerve line and if found will allow for cuticle removal without discomfort. With elephants that are sensitive or scared when approaching the cuticles a rasp will remove the cuticle with less stress than a knife, just be sure you don't dig into the top of the nail with the edge of the rasp as you remove the cuticle. When removing the cuticle using the method I am recommending you start from left to right removing the cuticle from the nail on the left and finish on the nail on the right. The space between the nails you created at first will now allow for extra tissue removal while going from nail to nail. Also remember the space you have created between the nails acts like a drain and if sufficient will allow all moist, water and urine to drain out leaving the foot drier longer.

## Reduce the size of the nails.



The nail size is a very important aspect for consideration. Number four nail for instance if allowed to grow too long can cause pressure problems on the foot over time. Consider this for one moment. In an elephant that sways or has a rocking habit, generally speaking with behaviorally abnormal elephants, nails two and three wear because of contact with the ground as they sway so nail four does not receive any wear and will grow long. Now, other facility and behavioral habits come into play, if the elephant for instance has stop laying down it

will stand to dose and rest. Nail four under these circumstances hits the ground and pushes up into the cuticle causing over time hot spots at the cuticle line and a hematoma inside the nail and then what we call an abscess. So keep all nails that have a tendency to grow too long because of abnormal wear short.

## Fine filing.



Using the fine side of your rasp gently remove a layer of the nail; now remember you are only removing a fine layer not reshaping the nail. If your nail is a good shape do not rasp. *Never use the rough side on the face of the nail.*

The nail is not a piece of wood you can rasp and re-rasp. One benefit from fine filing is the exposure of abnormalities within the nail, if say, there is a hematoma inside the nail the fine filing with show the shadow within

the nail so you have more information about the condition of the nail and the elephants behavior.

## Abnormalities.

Just a quick word concerning abnormalities. Abnormalities in your elephant's behavior should be dealt with immediately and not left to become habitual.

*Abscesses:* Are a symptom of a behavioral problem which might arise from stereotypical or repetitious movement.

*Cracks:* Are a result of the weakening of the nail casing.

*Flairs:* Are caused when the nail is allowed to grow too long and the elephant suffers from repetitious swaying movement redirecting the nail with the abnormal pressure.

*Injury:* Accidents.

## Tools.



Small hoof knife.



Large hoof knife.



Rasp.



Shapening stone.



Hoof knife hone.



Not recommended to use mechanical tools on the nails.

## Conclusions and Benefits.

Why implement this method? If you have one or two elephants and you work with these elephants 24/7 there is no reason to implement this method as long as you know what you are doing and have an understanding of elephant foot care. But let's say you are in a large team of people with new staff members, new people need to learn about foot care. Having a method under which everyone can operate is beneficial to all.

## Elephant Foot Care as a Culture in your Zoo.

Factors that could influence a foot care program.

1. Philosophy of institution.
2. Type of contact allowed.
3. Competence of personal.
4. Behavioral disposition of elephants.

Husbandry practices necessary for healthy feet in elephants.

1. Sufficient exercise
2. Proper hygiene.
3. Regular pedicures.
4. Natural substrates.

Components for appropriate foot care programs.

1. Experienced staff.
2. Trained elephants.
3. Access to feet.
4. Reliable equipment.
5. Proper facility design.
6. Sufficient **time**.

The foot pedicure.

1. Species difference.
2. Correct equipment
3. Foot positions.
4. Approach and time frames.
5. Nails.
6. Cuticles.
7. Pads.

Common problems associated with elephant feet.

1. Abscesses.
2. Cracks.
1. Pad over growth.
2. Nail Flairs.
3. Excessive cuticle growth, that creates water pockets.
4. Insufficient space between the nails.
5. Excessive growth of nails. (Nails are too long).

Conditions that can lead to foot problems.

1. Conformation.
2. Abnormal behaviors.
3. Trauma.
4. Arthritis.

Support aspects in the prevention of foot problems.

1. Expert consultation & evaluation.
2. Anatomical knowledge and function of the feet.
3. Recognition. "Know what you are looking at".

4. Facility design.
5. Individual elephant behavior. "Know what your elephant is doing".