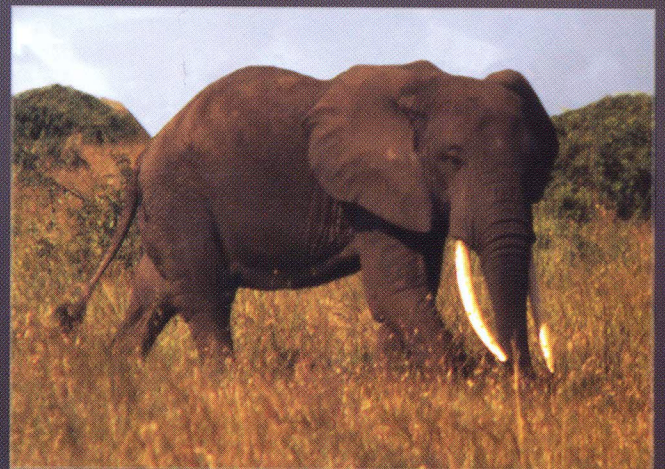


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Biology, Medicine, and Surgery of Elephants



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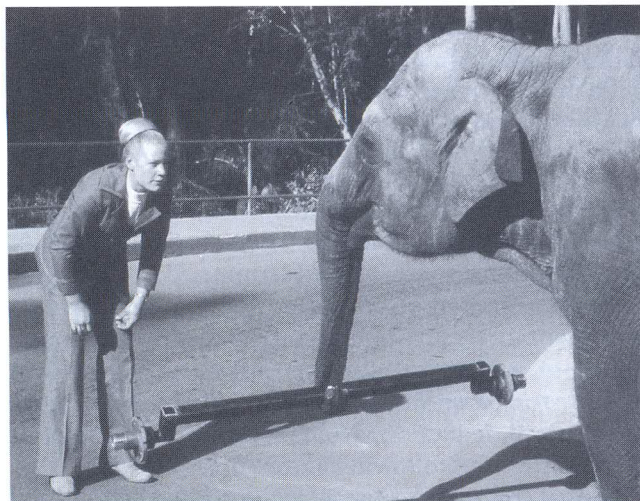


Figure 8.2. An elephant responding to verbal commands.

sponding to the handler's commands, it is unsafe for interaction and the veterinarian should leave the elephant area immediately.

PHYSICAL RESTRAINT WORKING DIRECTLY WITH THE ELEPHANT (FREE CONTACT)^{7,8,9}

Elephants should respond to voice (Fig. 8.2), visual and pressure commands, and cues. Minimal restraint may be applied to a calf or juvenile by grasping the ear. An elephant may be trained to place a foot on a spindle or tub (Fig. 8.3), lift a foot (Fig. 8.4), open the mouth (Fig. 8.5), or lie down (Fig. 8.6).

Elephants can rest standing up, but most will sleep soundly for a short time to several hours each day by lying on a side with their trunk coiled. Some elephants may never be observed lying down; in fact they may not be able to lie down or get up because of musculoskeletal problems. One female didn't lie down for 2 years as a result of poly-osteoarthritis. A female in a large zoo supposedly failed to lie down for 10 years because of arthritis in an elbow. It is important to make certain if an elephant is to be laid down that it is capable of rising. A conscious elephant may stay in a sternal position (stretched) for some time; however, if the elephant is chemically immobilized it must be pulled into lateral recumbency within 20 minutes to prevent respiratory embarrassment.

When an unanesthetized elephant is in lateral recumbency, avoid standing or kneeling between the fore and rear legs. If an elephant tries to stand up it will quickly swing the rear limb forward and backward with great force and may injure a person. A keeper at a zoo suffered fractured ribs from being in an inappropriate position.

Table 8.2. Commands Used in Elephant Management* (Olson 2004)

Command	Meaning
All right	Release from previous command.
Back up	Move backward in a straight line.
Come here	Move to the handler.
Come in	Move laterally toward the handler.
Ear	Present ear forward or through an ear hole in a barrier.
Foot	Front leg, foot to elbow parallel to the ground; rear leg, foot to stifle parallel to ground; present foot for chaining; move foot into the foot hole in protected contact.
Get over	Move laterally away from the handler.
Give	Hand object to the handler.
Lean in	Position body parallel to and in contact with a barrier in protected contact.
Leave it	Drop whatever is in the trunk.
Lie down	Assume lateral recumbency.
Move up	Move forward in a straight line.
No (quit)	Stop unwanted behavior.
Open	Open the mouth wide for visual inspection.
Salute	Raise trunk and foot simultaneously.
Steady	Freeze.
Stretch	Assume sternal recumbency.
Target	Move toward target, touched with target pole.
Trunk down	Drop trunk straight down to the ground.
Trunk up	Curl trunk up to touch the forehead.
Turn	Pivot in a circle, right or left.

*These verbal commands may be accompanied by touching an appropriate spot on the head, body, or legs.

Use of the Guide

The *elephant guide* has been used for centuries to communicate with elephants and assist in their management. The guide was previously called a *bull hook*, or *ankus*,^{1,9,32} but these terms don't denote the proper use of this tool and should be discarded. Examples of similar types of tools include the lead shank on a horse, use of a cane to direct a pig in a show ring, a collar and lead on a dog, leg pressure in dressage horse riding, a child on a leash in a crowd to prevent the child from becoming separated from a parent, or a parent directing a child by a hand on the shoulder.

The guide is a tool used to apply pressure to stimulate a specific response (lift a foot, move right or left, lift the trunk, lie down). Touching with a guide is a cue (signal) to begin a maneuver. Cues are used in the training of all kinds of animals.

The guide is made of a metal rod (preferably stainless steel) or cut from a metal sheet approximately 1 cm (3/8 in) thick. The straight prong has a side arm that makes it possible either to give a push or pull cue. The prongs are tapered to a narrow point, but should not be so sharp as to penetrate or lacerate the skin easily. The metal tip is attached to a wooden, fiberglass, nylon, or metal handle 30–90 cm (12–36 in) long.

The elephant guide should not be used indiscriminately because this is inhumane and exemplifies poor

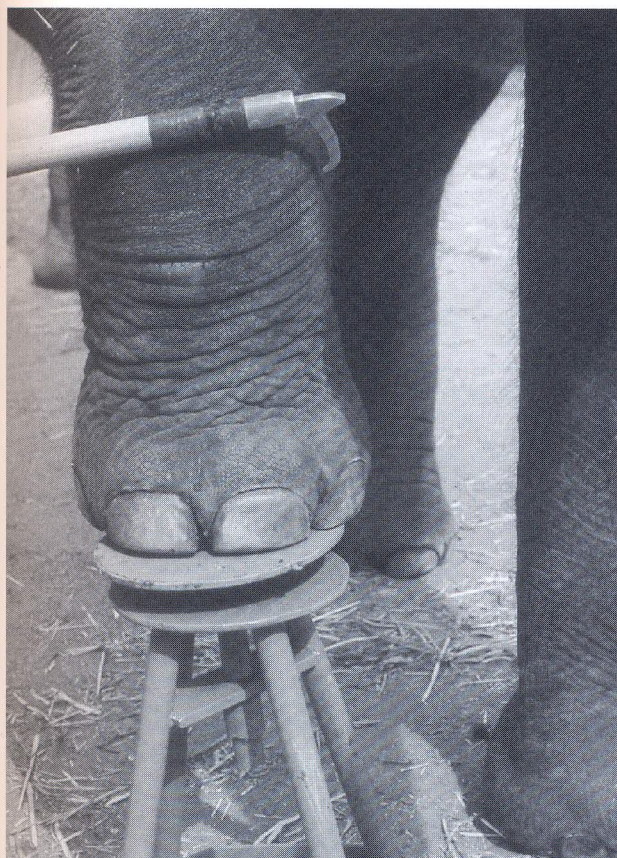


Figure 8.3. A foot placed voluntarily on a pedestal.

training techniques. The ultimate goal of training is that the elephant will respond to a verbal command alone so the guide is rarely necessary.

Leg Restraint and Tethering⁴

All elephants maintained in captivity should be trained to accept tethering on all four legs, whether or not the elephant is routinely tethered.^{3,9,12} A tether is a tool used to restrict the movement of the elephant for specific reasons. The tethering procedure should begin in infancy so that the elephant becomes accustomed to standing quietly while tethered. Chain is the common material used for elephant tethers. Rope may be used in place of chain when training a calf. A soft double-braided or cotton rope, 3.2–3.8 cm (1.25–1.5 in) in diameter, avoids abrasions and contusions. Ropes should be kept clean and dry. Fabric softener may be used to keep the ropes soft and pliable. A sharp knife should be available at all times when using rope for tethers to free the elephant quickly in case of an emergency.

Handlers using rope should be practiced in using knots, hitches, and splices so that in a pressure situation ropes can be secured and released quickly and expertly. Examples of chain usage with animals include tethers for long-term control of dogs and chain shanks on lead ropes for controlling high-spirited horses.

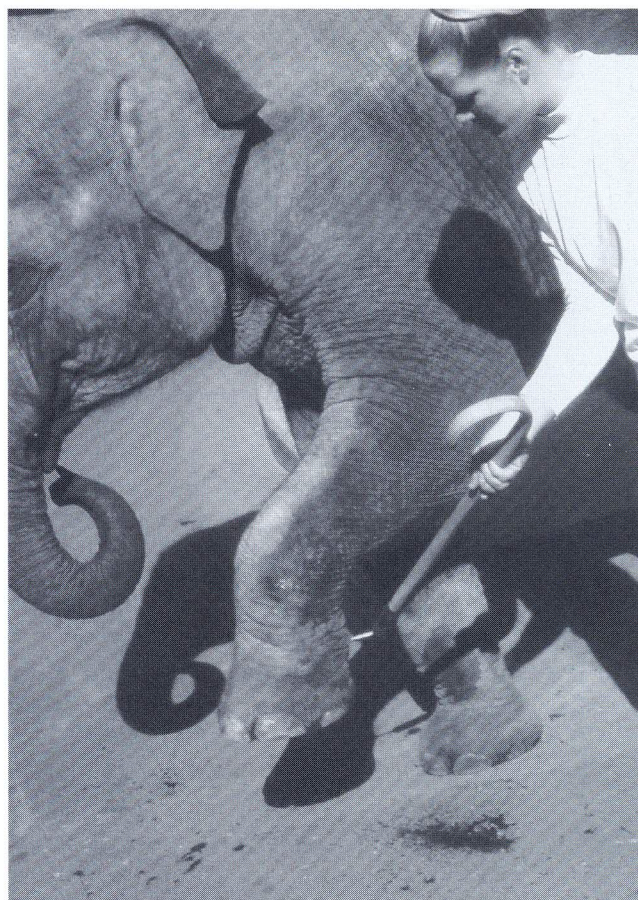


Figure 8.4. An elephant lifting a foot on cue from a guide.

A tether is a tool used to confine an elephant, serving the same purpose as a horse in a box stall, a pet dog or cat confined to a cage or room of a home, or a dog tethered to a dog house. Tethering keeps the elephant from wandering, provides security for other animals and people, provides order and routine for elephants, provides a special space for the elephant, and enables conducting routine procedures, such as toe nail trimming, administration of medication, and cleaning the area.

Chain is used instead of rope or cable because a chain is less easily tangled, is stronger and thus better for use with elephants, doesn't collect moisture (urine) as a rope or even a cable would do, and is more flexible. The desirable diameter of the metal rod used to construct the chain for elephant confinement is 5/16–1/2 inch. The chain links are welded (see Table 8.3). Chains used to restrict movement in a male in musth should be heavier. Chains are only as strong as their weakest links, which are usually the swivels, snap hooks, Brummel hooks, and slot links, so the connections should be checked daily.

Routine tethering has one front leg and the opposite hindleg tethered. Front leg tethers are attached to the lower leg between the foot and the carpus (wrist). Frequently an anklet or bracelet is placed on the leg and