Transportation and Shipping (Part Four Chapter 23, Zoo Animal Management extracted from ZOOKEEPING)
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Introduction
Live animal shipping can be challenging. Whether animals are being moved domestically or internationally, the shipments must occur quickly and efficiently without jeopardizing their well-being. The primary goal is to limit stress on the animal, as well as to ensure an efficient shipment so that all goes well in a timely manner. No two shipments are ever the same. Instead of providing a step-by-step account of a particular shipment, a more general sequence of steps will be described to demonstrate what is involved in live animal shipping. The steps are as follows:

- the relevance of obtaining background information on the proposed animal to be transported
- permitting and health requirements
- crates and crate training
- modes of transportation
- shipment date selection
- notification of proposed animal transport to all relevant parties
- documentation package preparation
- "day of" arrangements
- tracking of the shipment
- notification of successful animal transport.

After studying this chapter, the reader should understand
- methods of and approaches to the transportation of common zoo animals
- the importance of planning in animal transportation, and the types of preparation required
- specific considerations relating to each step of the live-animal shipping process
- general approaches to transportation of common zoo taxa.

Obtaining All Relevant Information on the Animal
Once it’s been decided that a specific animal will be transferred out of a particular zoo’s collection, internationally or domestically, the first step is always the same. A copy of the animal’s record should be provided from the sending zoo, the consignor, to the receiving zoo, the consignee. These records will outline the animal’s history, which includes its date of birth, sex, parentage, and any other pertinent information. Most accredited zoos in North America compile this information in a document referred to as the "specimen report". One of the key pieces of information in the animal records and/or the specimen report is the country of origin. This information is pertinent when crossing international borders, as it could influence permitting applications. (This will be covered in further detail below.) In addition to the specimen report, a diet sheet and medical records should be supplied to the consignee. The medical records will also provide information needed when addressing what pre-shipment health testing is required.

Permitting and health testing requirements
As a general rule, every country will have a minimum of two federal bodies that regulate the movement of live animals across its borders. One of these federal bodies will usually be a wildlife office. In Canada, this is Environment Canada’s (EC) Canadian Wildlife Service (CWS). In the United States, all zoos are familiar with the US Fish and Wildlife Service (USFWS). It is through offices like these that Convention on International Trade of Endangered Species (CITES) permits are issued. Animals will be listed as either CITES I, CITES II, CITES III, or non-CITES. A non-CITES animal requires no CITES permitting. A CITES II and III animal requires that an export permit be issued by the exporting country before transport of the animal can occur. A CITES I animal requires that an export permit be issued by the exporting country and that an import permit be issued by the importing country before transport of the animal occurs. These permits must travel with the animal while it is in transit from one country to the other. CITES permits are only required when crossing international borders. At the time of shipment, the original CITES permit must be handed over to the exporting countries’ wildlife authority to be validated. For example, a CITES I listed animal being moved from the United States to Canada will have its US CITES I export permit validated by USFWS during its exit inspection. Validation simply means that the USFWS officer will fill in information in a box located at the bottom of the permit, and then stamp the permit with the authorizing USFWS stamp. This occurs while the animal is still in the United States. When the animal reaches the first Canadian port of entry, the validated original US CITES I export permit and the original Canadian CITES I import permit must now be surrendered to the Canadian Border Service Agency (CBSA), Canada’s customs officials. Now the CITES-listed

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animal has legally left the United States and has legally entered Canada.

In addition to the CITES permits, some federal bodies also require further import or export permits, depending on the species of animal being proposed for transport. The USFWS, for example, issues endangered species/threatened species permits if the species is listed as endangered or threatened in the US Endangered Species Act (ESA). The USFWS will also issue import/export permits if the transaction is commercial—that is to say, if money is being exchanged as a condition of the animal’s movement. Another potentially required USFWS-issued document is the designated port exception permit, if a USFWS-designated port of entry/export is not being used. All zoo and aquarium animals imported into or exported out of the United States must be declared with USFWS. As such, USFWS has designated specific cities for the purpose of processing these declarations. Ports (cities) other than the designated ports can be used, but only with the designated port exception permit, on which will be listed the specific nondesignated ports allowed for use.

The second federal body that must be contacted is the agricultural agency. For example, Canada’s agricultural agency is the Canadian Food Inspection Agency (CFIA) and the United States’ counterpart is the US Department of Agriculture (USDA). Agencies such as these issue their own import permits (normally issued at the agency’s national headquarters) and export certificates (normally issued at the local office in the city where the zoo or aquarium arranging the animal’s movement is located). These permits and/or certificates are required for some animals, but not all. Agricultural agencies tend to be focused on the protection of their country’s livestock industry and are therefore most interested in hoofstock, swine, poultry, and similar domestic species. They are less interested in regulating animals such as amphibian and reptile species, with exceptions (e.g., in Canada, where the import of turtles is regulated by the CFIA to ensure humane transport practices). These agriculture agencies are responsible for deciding what health testing an animal is required to undergo before and after shipment has occurred.

For example, the CFIA requires that a white rhinoceros (Ceratotherium simum) being imported from South Africa undergo testing to certify that it is free of diseases such as bluetongue, trypanosomes, and bovine tuberculosis. The animal must then be retested for these diseases at least 21 days after the initial test date, but within 30 days of its intended importation date into Canada. If these requirements are not met, the rhinoceros will be refused entry into Canada. The same species being imported from the United States to Canada will require no preshipment testing, but only a CFIA inspection at the first port of entry. This demonstrates how testing requirements for a specific species of animal can change depending on the country from which the animal is being imported. This is a direct result of the health status of countries (i.e., the types and prevalence of diseases present) being different from one another.

Different zoos have different quarantine capabilities. In Canada, the CFIA has three categories of quarantine that an animal is regulated to undergo: nonquarantine, minimum quarantine, and medium quarantine. Any zoo can import an animal directly to its facility if there is no federal CFIA quarantine requirement. Both the minimum and the medium quarantine requirements dictate that the quarantine area must be approved by a federal veterinarian from CFIA before the animal’s arrival. Most zoos can do a minimum quarantine as it simply requires that the importation testing requirements be met and that the related information be provided to CFIA. Very few zoos have medium capability for quarantine, as this requires staff to shower when entering and exiting the quarantine area. In addition to this, other requirements of the building must be met, such as a separate air exchange for the quarantine area. When importing nonhuman primates into the United States, the animal must first be quarantined in a Centers for Disease Control (CDC)-approved facility for a minimum of 30 days, and until all import testing requirements have been met. This is because of these species’ potential to carry serious zoonotic pathogens and diseases such as Ebola Reston, herpes B virus (Cercopithecine herpesvirus 1), monkeypox, yellow fever, simian immunodeficiency virus, and tuberculosis. It is only after meeting these quarantine requirements that the primate can then be transferred to the zoo of import, where it will then undergo that zoo’s non-federally regulated quarantine, normally for an additional 30 days.

It should be noted that once an animal is transported into the importing country, there are specific quarantine requirements to be met for different species. In Canada, for example, an imported toad species requires no federal quarantine even though the importing zoo will have its own import quarantine requirements. The CFIA does not have any federal quarantine requirements for the Puerto Rican crested toad (Peltophryne lemur), but the Toronto Zoo has a 60-day in-house quarantine requirement that must be met before the animal is moved into the collection. An imported Red panda (Ailurus fulgens) from Japan will have a federal CFIA minimum quarantine requirement. This means that the CFIA must inspect the quarantine holding facility before the animal can be imported into the country. Once in Canada, the Red panda must be held in quarantine for a minimum of 30 days, and must undergo further testing before being released from quarantine. A swine species like the warthog (Phacochoerus africanus) must undergo a federal CFIA medium quarantine. Again, the CFIA must inspect and approve the quarantine facility prior to import, but in this case the requirements are more restrictive. The airflow must be regulated within the quarantine space, and keeper staff will be required to "shower in" prior to working with the quarantined warthog and "shower out" after that work is complete. Separate work clothes will be used and kept within the quarantine area. In this way, staff will avoid carrying
pathogens out of the quarantine area on themselves or their work clothes.

In addition to federal regulations for permitting, jurisdictional requirements must also be met. Some provinces or states require their own separate import and export permits, and also require that a certificate be issued, while other jurisdictions require only that an import number be issued and placed on shipment documentation. In-transit permits might be required if the animal has a connecting flight in a country that is neither the importing nor the exporting country. For example, if cheetahs (*Acinonyx jubatus*) are being moved from South Africa to Canada with a flight change in Germany, the German officials may require an in-transit permit indicating the purpose and length of the animal’s stay in Germany. It should be noted that this in-transit permit does not cover care and location for any unforeseen delays. It simply informs the in-transit country that the animal is going through that country on a specified date and time. If any unforeseen delay happens to occur in the in-transit country, that country will want the importer or the exporter to hire a local freight forwarder to feed, water, and care for the animal during the delay.

**Crates and crate training**

The International Air Transport Association (IATA) publishes the Live Animal Regulations (LAR). The IATA-LAR stipulates the requirements that must be met for shipping container construction and design for a specific species of animal. This reference material is updated every two years and must be adhered to strictly if the animal is being moved by air, or if the animal is CITES-listed and is being moved internationally. USFWS now requires that all CITES-listed animals being transported internationally must be moved in compliance with the IATA-LAR for that species, even if they are being moved by land. The IATA-LAR regulations are such a useful resource that it is strongly recommended they be used for all non-CITES domestic land transports as well. General considerations to remember when selecting a crate for an animal are that (1) the crate has external access for food and water, (2) the crate is leakproof, (3) the animal can be monitored while it is in the crate, (4) the crate is constructed of appropriate and sturdy material (e.g. wood or metal) which will safely contain the species, and (5) the crate is comfortable (e.g., contains the appropriate amount of bedding) for the animal. One of the most common mistakes when selecting an appropriate crate for a specimen is to provide too much space, the assumption being that a larger crate will provide the animal with increased comfort. Unfortunately, increased space also increases the risk of self-inflicted injury to the animal, which might try to run at the front or side of the crate in panic or in an attempt to escape.

As mentioned before, it is essential that a crate used to transport an animal be well constructed, clean, and leakproof. It must be able to contain the animal at all times, must prevent unauthorized access so that accidental opening of the crates during transit cannot occur, and must be appropriately ventilated. Generally, the container must be ventilated on at least three sides, with most of the ventilation being provided on the upper portion of the sides. It should be noted, however, that different species have different ventilation requirements. IATA regulation #34 for the gorilla, for example, requires that all four sides and the top of a crate must be ventilated. Ventilation holes must always be small enough to prevent the protrusion of the animal in any way, and in some cases they must be covered with fine mesh, wire, or muslin (a woven cotton fabric that allows for ventilation but restricts visual access). In general, the crate must be made so that the animal inside can stand, turn, and lie down in a natural manner. There are exceptions to this; for instance, some bird crates must incorporate a perch, and the bird must be able to stand and turn in a natural manner.

Crate training for the animal begins the process of providing it with physical and psychological comfort during transport. Key to successful crate training is the development of a plan before starting the process. Much information on training is readily available, but the following are very basic steps that may be followed. Generally, the crate is introduced to the animal and secured safely so that the animal can become used to seeing and/or smelling this novel item. The next step is the introduction of food at the entrance of the crate. This food, which can simply be a portion of the animal's diet, is then placed further and further into the crate over a period of time. The final goal is to ensure that the animal is eating its food with its body fully inside the crate. At this point the animal will usually display behavior indicating that it is comfortable eating in the crate. Generally the animal is not locked into the crate unless there is additional time for training prior to shipment, as once the animal is locked in, it is usually startled and will not go back to the crate again for some time afterwards. One of the main benefits to crate training is that it relieves much of the stress the animal might otherwise experience should it have to be forced into the crate. At the end of crate training the crate will be very familiar to the animal, with the animal's own smell present, and can be essentially the animal's "home away from home". Crate training can also eliminate the need to use sedatives for transport.

It should be noted that for some species using a trailer is a better choice than using a crate. General rules for crates still apply to the trailer; the animal must still be able to stand, lie down, and turn around naturally. Depending on the species, more than one animal can be transported in a trailer. Moving five female bison in a 6 m (20 ft.) trailer is completely acceptable, and can be less stressful on the small group than moving them separately.

**Taxon-Specific Transportation**

While specific methods of shipping animals will vary depending upon the taxa, some basic principles apply in most situations:
• Shipping containers must be secured to prevent the animal from escaping and unauthorized people from gaining access to the animal. This applies to the primary container, which immediately holds the animal, as well as to the secondary and tertiary containers, when applicable.
• No part of the animal should be permitted to extend outside the crate (e.g., through a ventilation hole).
• The shipping containers must be ventilated adequately for the animal being shipped. Specifics may be mandated by IATA.
• Temperature must stay within a range that is healthy for the animal.
• With some exceptions (noted below), animals should have space to move around within the shipping container.

Reptiles
Crates used to transport reptiles need to be adequately ventilated, although it should be noted that reptiles may require less oxygen than other species. A standard reptile crate is made of wood and is usually lined with polystyrene foam. A thin wire mesh or muslin should be fixed between the wood and polystyrene foam, covering the ventilation holes. In some cases a polystyrene foam box within a cardboard box will suffice. Transport of most reptiles will require that a primary container is placed within a crate. It is important to note that reptiles are generally packed dry, with no moisture making direct contact with the animal, although there are exceptions to this general rule. In the case of snakes the primary container can be a cotton bag; for small turtles it can be a cotton bag or a clear plastic ventilated box. Turtles and tortoises must be transported in a natural position, with the plastron on the bottom. No stacking of turtles and tortoises is permitted. Heat packs can be used if there is a concern that the animals might be too cool during transport. If heat packs are used, they cannot come into contact with the primary container or with the animals themselves. Larger reptiles such as crocodilian species must be packed singly, and the direction of the head should be indicated on the outside of each crate. This is in direct contrast to the general rule that an animal must be able to turn around in a crate. The crate containing some of the larger reptile species (e.g., crocodiles or large monitor lizards) must ensure that the animal cannot turn around so that the direction of the head is known at all times. This becomes important when the animal is released from the crate, since not knowing which end of the animal will exit the crate first will pose a greater risk to the keepers’ safety. In the shipment of a venomous snake, a translucent fabric bag should be used as the primary container, which then can be placed within a ventilated clear plastic box as the secondary container. The plastic box, in turn, will be placed in the polystyrene foam-lined wooden crate. Thus the venomous animal is said to be “triple contained,” which is an important safety measure. It is essential that each of these containers be sealed securely; the bag must be tied tightly and can be secured with an electrical zip tie for added security. Always remember that it is possible for the venomous animal to see motion through a translucent bag, and therefore can strike and bite through the bag; hence the importance of the secondary container of transparent solid material. The translucent bag should be labeled with the animal’s common name, scientific name, and current body weight. It is always a good idea to provide information on the outside of the wooden crate explaining exactly how the venomous animal is contained within.

Amphibians
The transport of amphibian species is quite similar to the transport of reptile species. The major difference is that amphibians are generally transported on a moist substrate, such as moistened moss, sphagnum, or even moistened paper towels inside their primary container. The primary container can be as simple as a polystyrene foam cup or a clear plastic container. Again, the primary container can be placed inside a polystyrene foam-lined cardboard box or wooden crate. It should be noted that the primary container must be large enough to allow the entire ventral surface of every animal to make contact with the bottom of the container. As with reptiles, heat packs can be used as long as they do not come into direct contact with the primary container or the animal.

Birds
Bird species should be crated with great care, as they have the ability to injure themselves greatly within a crate or rigid plastic pet container (kennel). Because of this, the interior must be safe for the bird, all edges must be smooth, and there must be no sharp projections of any kind. Wooden perches must be provided for the majority of bird species and must be placed in a position to ensure that excreta will not fall into the food or water dishes. Ground-dwelling birds normally do not require wooden perches. A nonperching bird should have non-slip flooring and the bird should be able to stand in a natural position. It is recommended for most birds that padding is added to the interior roof to prevent injury should the bird attempt flight within the container. It is particularly important that crates are securely closed, since once a bird escapes during transit, it may be very difficult to catch it again. Larger birds such as ostriches (Struthio camelus), emus (Dromiaus novaehollandiae), and tall cranes can be transported overland via trailer instead of being crated.

Mammals
Hoofstock. Most larger hoofstock species can best be moved via trailers overland. If space and time allow, the animal can easily be acclimated to the trailer before its shipment. Simply feeding the animal inside the trailer can help with the acclimation process and make the trailer a safe and secure surrounding for the animal. If the animal is being transported by air, then using an IATA-specified crate will be mandatory. This may require the use of a forklift or crane to lift larger, heavily constructed crates. Crates for hoofstock are another exception to the recommendation that a crate be large enough for an animal to turn around in. For hoofstock the crate should be narrow enough to prevent the animal from

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turning around, so that when it is released from the crate its direction can be predicted. For this reason, the direction of the head should be indicated on the outside of the crate.

**Carnivores.** The larger carnivores such as tigers, lions, and bears should be transported in sturdy, solidly constructed metal crates. As well as ensuring that no part of the animal can fit through a ventilation hole, one must ensure that no person can inadvertently get too close to the crate and come into direct contact with the animal. Padlocks should always be used to secure these crates.

**Primates.** Smaller primates can be transported in modified pet carriers. Some primate species will require either branching to hang from or shelves to perch upon. Most medium-sized primate crates must have very good ventilation on three sides of the crate. For larger primate species, the roof must be adequately ventilated as well. Padlocks are recommended to secure these crates.

**Fish and Aquatic Invertebrates**
Fish and aquatic invertebrates are generally packed in a strong plastic bag containing two-thirds air (to provide oxygen) and one-third water. Most zoos and aquariums will then place this bag inside another plastic bag of the same size, thereby "double-bagging" the fish or invertebrate. The bag is the primary container and is placed inside a polystyrene foam-lined cardboard box or wooden crate that must have adequate strength to contain the weight of water and resist crushing. Fish are usually fasted for a 24-hour period prior to shipment, so as to reduce excreta and ammonia formation that will foul the water. Fish are directly affected by ambient temperatures, so the shipper must ensure that a suitable temperature is maintained during the entirety of the transport.

**Terrestrial Invertebrates**
Invertebrate species are often placed in a primary container which can be clear plastic or cardboard. They can be packed with some food, which will provide nourishment as well as moisture. The primary container is then placed inside a polystyrene foam-lined cardboard box. Due to the greatly reduced amount of oxygen required by these species, the air in the primary containers at the time of packing is normally sufficient for transport. If additional ventilation holes are required, a thin material should cover them so as to allow the exchange of air but still prevent the escape of animals.

**Mode of Transportation**
When considering what mode of transportation to use, consider what will get the animal to its destination safely and as fast as possible. Always use the most direct route available. If possible, avoid inter-airline transfers. The risk of something going wrong increases significantly if two different airlines are used. Usually a freight forwarder is required, to physically collect the animal from the first airline and deliver it to the next. A freight forwarder is a company that acts as an agent on the zoo’s behalf to arrange an airline booking or to switch an animal between different airlines if necessary. Most airlines now require up to five hours to remove the animal from one plane and move it to the connecting plane, even if the actual physical transfer takes only an hour of real time with the remaining four hours of time spent waiting. It is always best to have minimal layover times, but making that happen has become more and more of a challenge. Also, most airlines now require the animal to be dropped off at least two hours in advance of the departing flight if the shipment’s destination is domestic, and four hours in advance if the destination is international. So what appears to be a quick trip for the animal by air could actually involve as much time as moving it by land, if not more. For example, to move a capybara (Hydrochoerus hydrochaeris) from the Toronto Zoo to the Cleveland Metroparks Zoo in Ohio by air could require a route of Toronto-Chicago-Cleveland, with four hours of drop-off time, one hour of flight time to Chicago, five hours of downtime in Chicago to switch planes, one hour of flight time to Cleveland, and one hour of recovery time at the Cleveland airport. All told, the animal would be in transit for up to 12 hours. It would be better for the animal to make the trip via a five-and-one-half-hour drive with a one-hour stop at the border for customs clearance. It is also important to make sure that all live animal restrictions for a particular airline are known. Some airlines will not carry venomous animals. Some airlines that will not fly animals internationally will fly them domestically. Some airlines will fly animals only on direct flights and not on connecting flights. The list of restrictions is extensive.

Moving an animal by air or by land (road) is preferable to moving it by rail or water, simply because of the time involved. It can be argued that moving an animal by road can take just as long as moving it by rail, but during a road trip a transporter is directly responsible for the care of the animal. An animal being moved by rail is considered perishable cargo and will not necessarily receive the same level of care while in transit. Moving an animal by sea may take days, which means that it is crated for a very long time. Airlines now have the capability to move even the largest of zoo animals, and can do so in a fraction of the time it takes to move by water. Most airlines do not have animal-care specialists for layovers, but a freight forwarder or a zookeeper in the layover city can be recruited to care for the animal.

**Shipment Data Selection**
Before a shipment date can be set, several things should be considered. One of the foremost considerations for both the sending and receiving zoos is the weather. Winters can be too cold for live animal shipments, and summers can be too hot. The zoo or aquarium responsible for transporting the animal has to be ready to send the animal, and it will require time to complete crate training if that is deemed necessary. A gorilla (Gorilla gorilla gorilla) might be crate trained in just seven days, while a
moss (Alces alces americana) might require up to four weeks. Another consideration is whether the animal is old enough for transport. The IATA-LAR has very strict guidelines about not moving primate species while they are still nursing from the mother. AZA Species Survival Plans (SSP) also have guidelines for various animals. Both the white rhinoceros SSP and the giraffe SSP recommend that these species not be removed from their mothers before the age of two years. The receiving zoo has to be ready to receive the animal as well. Perhaps it is receiving a species new to their collection, and a new exhibit must be completed first. Or perhaps it needs to move a specimen out to another zoo before it can receive the new animal. Once all these considerations and any others have been addressed and resolved, it's time to select a tentative shipment date.

Notification of All Involved

The tentative shipment date must be selected by the zoo sending the animal and agreed upon by the zoo receiving the animal. Once this date is selected, an airline booking is made or land transporter is arranged. Once the mode of transportation is decided upon and booked, the wildlife and agricultural agencies responsible for monitoring animals in transit need to be notified and/or booked for inspections. Inspections are often required in both the exporting and the importing countries. Most agencies require a minimum of 48 hours notice, but some can require as much as 72 hours. Which specific agencies are required for inspection will depend on the species being transported and the regulations of the countries involved. Increasingly, customs brokers have to be used to complete the customs clearances at the first port of entry of the importing country. A customs broker is an employee of a brokerage firm who acts as the zoo's representative during import or export. This involves the preparation of electronic or nonelectronic submissions to customs for clearance. Some ports still allow zoo personnel to present shipment paperwork for customs clearance, but more ports are insisting that brokerage firms be used, and this will therefore add a fee to the overall cost of shipment. Therefore, it is advisable to contact the customs offices of both the importing and exporting countries for verification. In some instances a freight forwarder will have to be used. Most airlines will only allow bookings from "known shippers," which most zoos are not, as they simply do not use airlines often enough to maintain "known shipper status". In this case a freight forwarder would be used to make the booking on the zoo's behalf. This is unfortunate, as the freight forwarder is now a third party, which causes the cost of transportation to rise and could cause a delay in shipment if the freight forwarder is not readily available. Of course, if the animal is being moved domestically, with no international borders being crossed, then the notification process will be simpler, involving the sending zoo, the receiving zoo, and the selected mode of transportation. The state or province from which the animal is being moved will also need to be contacted, in case there are any state or provincial requirements that must be met.

Preparation and Forwarding of the Document Package

Documentation packages should be prepared and forwarded to all parties when they are notified of the shipment. It is at this point that any necessary corrections to the shipment paperwork should be made. Federal veterinarians of every country are very particular about the wording on health certificates and will supply the correct language to be used on documentation. The following is a list of some documents that might be included in a shipment package for an animal being moved from Canada (shipper/consignee) to the United States (receiver/consignor).

1. permits and licenses
   - CITES I import permit
   - CITES I, II, or III export permit
   - USFWS endangered/threatened species permit
   - USFWS designated port exception permit
   - USFWS migratory import/export permit
   - marine mammal transport permit

2. health certificates
   - standard zoo health certificate issued by the zoo veterinarian for non-federally regulated species
   - federally issued health certificates for federally regulated species

3. air waybill (for animals transported by air)
   a document issued by the airline which serves as a means for identifying and tracking the shipment until shipment has been turned over to the consignor

4. manifest (for animals transported by land)
   a document issued by the land transporter that serves as a record of employment by the zoo to transport the animal from the consignee to the consignor

5. handbill of transporters (for animals transported by land)
   a document issued by the land transporter that serves as a record of employment by the zoo to transport the animal from the consignee to the consignor

6. certificate of origin
   a document issued by the shipper certifying the country in which the animal was born

7. specimen report:
   a document issued by the shipper which provides pertinent information about the animal being transported, including the animal's place of origin, date of birth, sex, identification information, parentage, microchip numbers, tags, bands, tattoos, etc.

8. diet sheet
   a document issued by the shipper outlining the animal's diet at the consignee zoo
9. medical records
a document issued by the shipper outlining the animal's medical history

10. declaration of import/export
a document filed by a zoo in the United States to the USFWS outlining that a particular species of animal is scheduled for transport on a particular date, and including the US port of entry or exit, the consignor's address and contact information, the consignee's address and contact information, the animal species (both scientific and common names), the permit numbers required to move the species, the animal's origin (wild-born, captive-born, or unknown), the number of species being moved, the animal's monetary value, and whether or not the species is considered venomous

11. IATA shippers certificate
a document issued by the shipper certifying that the shipment has been packed in accordance with the IATA live animal regulations, and specifying whether the animal(s) have been properly acclimatized if taken from the wild, if the animal(s) is a CITES-listed animal; and in the case of reptiles and amphibians, if the animal(s) is healthy and free of any apparent injury and external parasitic infestation; this document also states the air waybill number, airport of departure, and airport of destination

12. commercial invoice
a document issued by the shipper certifying the animal's monetary value, which must be declared for customs purposes even if the animal is a donation or on loan

13. AAZK animal data transfer sheet
a document issued by the shipper which provides a plethora of information on the animal's identification, diet, medical history, enclosure/holding history, training history, and behavioral history.

"Day of" Arrangements
One of the most important arrangements to make for the day of shipment is to ensure that the most experienced keepers are on hand for the crating. These might include the keeper who has been crate-training the animal, or those who have been involved with past shipments of the same species. One must arrange for the appropriate number of staff to assist with moving the crate on the day of shipment, and ensure that all appropriate equipment will be on hand. Moving rhinoceros, elephants, and other large species requires front-end loaders, forklifts, and/or cranes, which may have to be supplied by a company offsite and will require arrangements made in advance. Though an inspection appointment will have already been set upon notification of the regulatory officials, some inspectors also require a phone call on the morning of the shipment day to narrow down an exact time for the inspection. If the animal is being moved internationally, at least one inspection on the day of shipment will always be required. If the animal is being moved domestically, inspections are usually not required by regulatory bodies.

Tracking of the Shipment
Most if not all airlines have made the tracking of shipments much easier by adding tracking systems to their websites. The tracking number, which often is simply the air waybill number, can be entered on the airline's website to produce an update of where the animal is at any moment in the shipment process. Airlines can also be contacted directly by phone to obtain the same information. If the animal is being moved by road, the driver should carry a cell phone. When the animal is crossing international borders by road, communication between the driver and either the shipper or the receiver is of the utmost importance and should be required for all shipments. If the driver will be late for previously booked inspections, the inspectors need to be notified that the shipment is behind schedule. Once the animal has cleared the border, the driver should notify either the exporting or the importing zoo or aquarium of the delay and provide an updated estimate of arrival time. There can be times when the transporter is moving several animals to multiple zoos. In this case, the routing should have already been established and agreed upon by the transporter and the facilities involved. Generally, the facility closest to the border crossing will unload its animal(s) first, the next closest facility will unload its animal(s) next, and so on.

Notification of Arrival
A step sometimes overlooked in an animal shipment is for the receiving zoo to notify the sending zoo of the animal's safe arrival. The welfare of every creature undergoing transfer from one facility to another is very important to the team at the facility of origin. A quick e-mail from the receiving zoo or aquarium indicating the animal's safe arrival will be much appreciated!

Summary
As indicated in the introduction to this chapter, this information on animal shipping is by no means exact or comprehensive; rather, it provides a formula with which to begin. Obtaining background information on the animal proposed for transport will allow for the receipt of appropriate permits and follow-up on the required health testing. Next, selecting an appropriate crate and proceeding with crate training is imperative to ensuring a successful shipment.

Being knowledgeable in the different modes of transportation is also important. Once a choice is made, a shipment date can be selected. At this point, notification of the proposed animal transport must be sent to all relevant parties, followed by the delivery of documentation packages to each. "Day of" arrangements can then be made. Once the animal is in transit, the sending and/or receiving zoo or aquarium should actively track the shipment. Finally, notification of the animal's arrival at its destination should be sent by the receiving institution. Live animal shipping, particularly across international borders, can be quite overwhelming. But following the shipping steps outlined above can ensure that the animal's transfer need not be a stressful experience.