



WILDLIFE *Photography*

for Fun and Profit: Constructing and Installing Wildlife Photography Blinds

————— Miles Phillips*

Many people are becoming interested in watching and photographing wildlife. A 2001 U.S. Fish and Wildlife Service study revealed that more than 9.4 million people traveled for the primary purpose of photographing wildlife. Another 4.5 million said they photographed wildlife at or close to home. Clearly, photographing wildlife and scenery is a major recreational activity.

Texas has what are believed to be the two richest wildlife photography contests in the world. The South Texas Shootout offers more than \$100,000 in prize money to landowner/photographer teams. The Texas Coastal Bend Wildlife Photography Contest is another successful event.

In the lower Rio Grande Valley, a small group of landowners have installed photo blinds and joined together to market wildlife photography opportunities. Current rates are approximately \$100 to \$150 or more per day per person to use blinds all day including sunrise and sunset. The willingness of photographers to pay for private land access has created new opportunities for wildlife conservation and income.

However, to have a successful wildlife photography enterprise the landowner must offer customers a satisfactory experience. That means the photographer will have a good chance of capturing high-quality images of the birds and other wildlife of your area. One of the most successful ways to aid the wildlife photographer is to install specialized blinds.

The primary reason for using a blind is to hide the photographer's form and movement. This makes it possible to get close-up photographs of animals. Wildlife usually become accustomed to blinds over time, whether or not they are camouflaged. But to the photographer, a camouflaged blind may seem more worth paying to use.

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Types of Blinds

Surface blinds

Most photographers will want to photograph their subjects at eye level. Surface or ground-level blinds that have openings in front all the way to the ground allow a photographer to lower the camera to the desired position near the ground. This may alleviate the need for a pit blind. Strategically placed perches also make it possible to get eye-level photos from a surface blind. Surface blinds can be relocated or adjusted as needed throughout the year. On sloping terrain, a surface blind can sometimes be oriented so that it has the same advantage as a pit blind.

Pit blinds

A pit blind is a blind built over a hole excavated in the ground so that the photographer sits at about eye level with small animals on the ground (that is, about 1 foot above the ground surface). This makes it more comfortable than a surface blind. A pit blind also has a lower profile than a surface blind, which is important both for camouflage and for high-quality photography. Generally, you want the sun behind you to light up the subject animal. A pit blind casts a much smaller shadow than a surface blind, so there are more opportunities for good photographs. A blind can be 2 to 4 feet high over a pit that is 2 to 4 feet deep. Reinforce pit walls for safety. Be very careful about pit depth and location to avoid maintenance problems; give special attention to the direction of rainfall runoff to avoid having your blind fill



These eye-level photographs were taken by an amateur photographer using inexpensive equipment and shooting from a well-designed blind.

with water. You will probably need to install steps or a ramp to make access easy. A disadvantage of a pit blind is that it cannot be moved.

Elevated blinds

A photographer usually wants eye-level photographs of animals, so a traditional elevated hunting blind will almost never work for most animals. And, in most hunting blinds, the openings are too small for cameras. However, a hunting blind modified by enlarging the front opening may work well for specific sites and, depending on your ability to move it, could be placed on the ground, over a pit, or elevated on a stand for a specific site and purpose.

Occasionally, photographers would like to photograph owls and hawks nesting. This requires an elevated blind. Archery tripod hunting stands work for this. Or, you could construct two or three sections of scaffolding with a portable photo blind on top. Large elevated hunting blinds may work if you consider the door to be the front opening or if you are able to create proper openings for camera ports.



This is a portable, PVC-frame blind with a plywood roof; it is built over a pit. The camo burlap outer cover may move too much in the wind, but it is cool. A finer mesh camo netting is used as a second layer and placed over camera ports for better viewing. Access is from the side, but there is no ramp or stairs.

Consult a wildlife biologist to determine when and how to set up the blind so as not to interfere with nesting success or unknowingly cause problems for wildlife. Never move the scaffolding or blind into place until after the young have hatched, and keep it at least 30 feet from the nest.

Tent/portable blinds

Keep at least one very portable blind at the headquarters for use by solo photographers who want to set up at a special site (such as a woodpecker nest cavity or a badger burrow) where there is no fixed blind. Tent blinds can be purchased at almost any hunting supply store or on the Internet for about \$100. Some of these have color patterns that can fade or turn reddish with continued exposure to sunlight.

Building and Placing Photography Blinds

Size

A blind should be at least 5 feet high so the photographer(s) can sit upright, but it doesn't necessarily have to be tall enough for people to stand in. Photographers are usually in the blinds just 2 to 3 hours at a time so they don't need to stand and stretch. A one-person blind should be at least 4 feet deep and 4 feet wide, preferably larger. If a blind is to accommodate more people, it should have 4 to 5 feet of width for each photographer, plus space between photographers. Camera ports should be about 3 feet by 3 feet and the edges of camera ports should be at least 2 feet apart. Each photographer needs about 4 feet of space for tripod and gear. With additional people there will be additional movement, and it may be helpful to make the blind deeper (from front to back) so people have space to walk behind each other and to store gear.

Another option is to leave the entire front open, which allows ample room to maneuver large lenses or cameras with flashes. To cover the front, run a cord or wire across the inside of the blind above and below the window and hang pieces of camouflage netting between the cords with clothes pins. The netting should be lightweight "mosquito netting," which allows good outward visibility. Allow the netting to drape over and around the lens to cover it and the photographer's movements. A port should also be placed in each end of the blind unless an end is up against rocks or vegetation and can't be used.



This portable surface blind has a welded aluminum frame, plywood roof, and nylon shade siding. It could also be fitted with a waterproof tarp on the roof and sides. The opening would be covered by the photographer with the fine camo netting attached with clothes pins to cords above and below the opening.

Construction

You might consider building your first blinds with PVC frames (1¼-inch-diameter pipe) wrapped with fabric. These blinds are mobile and inexpensive. Once you know the exact locations where blinds should be, you might want to make them out of more permanent materials. Even then, however, you could build them on skids so they can be moved. Don't forget to anchor lightweight PVC blinds with tie-downs or pins in the ground.

Design considerations

Roof. A tarp or other rainproof material can be used instead of plywood or tin. But it will need to be secured so it won't flap noisily in the wind.

Back. If not made of wood, the back is covered by burlap, solid camouflage cloth or nylon shade cloth to prevent the passage of light. As many as four layers of shade cloth may be needed. Using solid camouflage cloth will improve the aesthetics of the blind, which could be important to your customers.

Sides. The sides are usually covered with the same material used for the back to prevent the passage of light. Openings can be created and screened with camo netting. Generally only view ports are needed in the sides, not photo ports, because they are used to spot wildlife approaching the blind. Many blinds have only front openings.

Front and side openings (view and photo ports). The entire front will be left open and camouflage net-

ting will be put into place upon entering the blind. The netting will be pinned to a rope strung along the bottom front edge of the blind and along the top front edge. A popular option is to place a second rope along the top of the blind about 18 inches in from the front edge and use this to hang the camouflage netting. Note: The type of netting you use is important, as you want to hide the photographer from view while still allowing the photographer to see out without looking through the camera. It is suggested that you cut the netting into 18- to 36-inch-wide strips to hang in place around the camera. This allows mobility and options for the photographer.

Small side openings can be cut out of the side cloth and netting pinned to the edges. Openings 12 inches wide by 6 inches high work well. You may choose to cut only the bottom and side edges of the opening and then use clothes pins to pin the flap up and hold the camouflage netting in place.

Entrance. In most cases the photographer will get into the blind and wait for wildlife to arrive, as opposed to entering the blind to photograph wildlife that is already there. So the entrance will usually be from the front. However, if the setting makes this difficult or undesirable you may want to create an opening in the back or side by cutting a door in the cloth. Once inside, the photographer will pin the cloth door closed to prevent light from entering.

If it is possible to design your blind so that it can be entered without disturbing wildlife in front of the blind, do so. (This is generally difficult to do.)

For a pit blind, you might want to have a hinged roof section and a ramp or steps that allow you to step down into the blind easily.

You might want to design at least one blind that has extra space, level surfaces and other adaptations to accommodate those with limited physical ability. In any case, try to make access as easy as possible.

Floor. In general, a dirt floor with a piece of indoor/outdoor carpet is all you need. If water on the ground is a concern, you can install a plastic or metal grate to elevate you above the ground a bit. Sections of heavy-duty plastic shelving (available from home improvement stores) placed on the ground work well. Wood floors are generally noisy and concrete is not safe for expensive equipment that might get dropped.

Other features

Sturdy, comfortable, quiet chairs (fabric or plastic) or stools with backs (for comfort) work best for seating. Metal chairs are noisy.

Keep a sealable box in each blind for storing insect repellent, extra camouflage material for covering shooting ports, and clothes pins for holding camouflage material in place over the shooting windows. Also store a 1-gallon, sealable container of bird feed photographers can use to lure birds to specific spots. All these materials must be stored in sealed containers to keep out animals.

Blind locations

Obviously, you will want to place blinds where photographers are likely to see the most wildlife, and where they are likely to see any species for which your area is known. In South Texas, for example, birds such as green jays, kiskadees, least grebes, paraques, groove-billed anis, golden-fronted woodpeckers, pyrrhuloxias, verdins and buff-bellied hummingbirds are a real draw, as are animals such as deer, javelinas, armadillos, Texas tortoises and diamond-back rattlesnakes. A single blind location is rarely effective for photographing all kinds of wildlife; there should be separate blinds for birds and for big game animals.

The best time of day for photography, from a lighting standpoint, is early morning and late afternoon or early evening. Fortunately, these are the times of day when wildlife are most active. Remember that lighting and background are very important for photography, and a good wildlife location deep in a thicket will rarely have enough light for photography. Some people may want to do night photography, however, in which case such locations would work.

Most photographers will be using 400- to 1000-mm lenses and will want to be no more than 20 feet from small subjects such as birds and within 20 to 40 yards of mammals such as deer to get good shots. Keep this in mind when placing blinds.

Place photo blinds at the southeast and southwest ends of the photo areas, such as ponds or water holes, for best lighting during peak photography times (early morning and early evening). Keep vegetation trimmed and orient the blind so that the sunlight will not be blocked from the target area. Place some large snags or stumps strategically in the pond where birds can perch and turtles can sun, making sure they are within range of the photo blinds. When trimming vegetation, remember that you do not want saw cuts to show up in photographs.

Some photographers might want blinds that extend out over water. And some photographers even use flotation devices covered by floating blinds

to actually get out into the water and take pictures looking toward the shore.

Before you build the blind you will want to confirm that the location is desirable and that the orientation of the blind is suitable for photography. You can do this by observing, measuring and marking the sun/shadow patterns at the location. (Of course, these will change during the year.) You want to make sure that the shade created by your blind does not shade the target area for photographing wildlife. Testing the location and orientation of the blind also allows you to select the most desirable sites for water, perches and feeders.

If possible, install a ground-level blind and test it before creating a pit blind. You may find that it is more desirable to be able to move the blind throughout the year to adjust for light rather than to have a pit blind.

Enhancing the Blind Site

Feeding

Feeding is used mainly to attract birds. Use a good mix of birdseed with sunflower seeds, millet, milo, etc., to attract the seedeaters such as doves, quail and sparrows. Also place a sliced orange at each blind each day to attract orioles, woodpeckers, green jays and many other birds. Another good feed is a mix of peanut butter, lard and corn meal.

Put out only enough feed for one day; otherwise the raccoons and opossums will eat it at night. Don't put feed on the ground because that attracts feral hogs and deer that will tear up the ground; grain on the ground also detracts from the natural appearance of a photo. Instead, hide seed or peanut butter

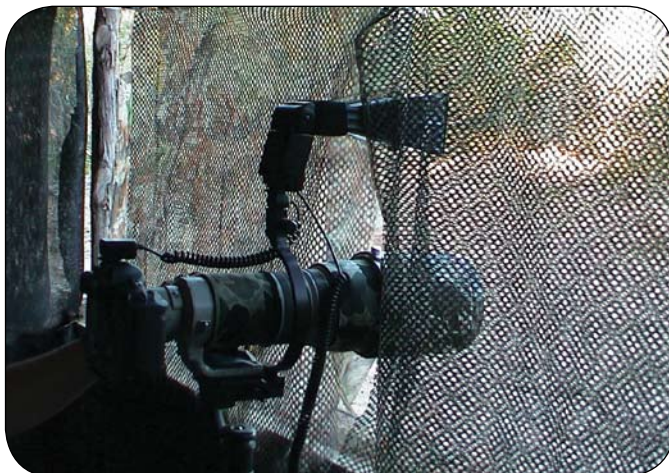
paste in crevices and holes of logs where it doesn't show, and attach orange slices to the back sides of logs out of sight of the camera. The logs double as perches.

Standard hanging feeders can be used to attract birds where no one is able to visit the blind daily. Place the feeder close to the blind but somewhat to the side so that it will not show from most photographic angles.

Automatic timed feeders, or commercial deer feeders, also can be used. To attract birds, you will want to modify the feeder by placing a platform under the feeder and a collar around the spinning disk to cause the feed to fall straight down onto the plat-



This permanent pit blind has a wood frame and wood walls to support the earth. The roof is plywood and the sides are a combination of nylon shade cloth and burlap. The front is left open for the photographer to cover with a combination of rough and fine mesh camo netting. Access is via a ramp and flap door in the back, or by crawling in the front.



The interior of the blind above shows the type of camera, flash and tripod set up a blind should be able to accommodate. The cord along the ceiling is used to attach camo netting with clothes pins.

form. Be careful to set the timer so that only a small amount of feed is released. Also be careful to set up the feeder so that raccoons can not climb onto it. A problem with this type of feeder is that it is hard to avoid having it show in photographs, so plan its use carefully. It may be possible to use a small bucket with a timed feeder and hang it in such a way that it can be moved when photographers are actually in the blind.

Whether you are trying to attract big game or birds, feeding at the same time every day will create some changes in animal behavior and increase animal activity at “feeding time.” For example, feeding may cause nest predators such as raccoons to use the site more, or even increase in population if lots of feed and water are available throughout the year.

Water features

Water is a fantastic attraction for wildlife, so the best location for blinds is near ponds and water holes. If there is no natural water feature available, a very small “water hole” (even one as small as 3 feet in diameter) can be created by simply placing a plastic liner in the ground and filling it with water. Adding a drip system will help attract birds. With just a 5-gallon bucket, a faucet, drip tubing and a valve, you can set up a gravity-fed drip system that will work for hours. You simply need to elevate the bucket a couple feet above the surface of the water and hide the drip tube and equipment so it does not show in photographs.

Of course, a permanent water source will attract many more animals than one that is only full of water occasionally. If you have a nearby water supply where you can connect piping or hose, you may want to do



This water feature is a round, metal water trough sunk level with the surface of the ground. It is kept full with a water pipe and a float control valve. This feature does not have sloping sides, but it still provides access for most wildlife species.

this. You can set up a constant slow-drip system with standard drip irrigation supplies. Or, you can install a rainwater collection system on the roof of the blind and use gravity to produce a slow drip.

Ponds and water holes used for photography should be kept at a constant water level, if possible, so that wildlife will use them regularly and predictably. A constant water level allows aquatic vegetation to become established in and around the pond. Vegetation provides food and cover for invertebrates, fish, reptiles and amphibians. They, in turn, will attract ducks, grebes, wading birds, kingfishers, kiskadees and large reptiles such as indigo snakes. Aquatic plants filter water to make it clear and photogenic and they are used as nest material by grebes.

Create gently sloping sides in the pond (less than a 30-degree angle) so birds and animals can wade into the water to hunt, fish or bathe. If the water level fluctuates, gently sloping sides allow constant access to the water.

A shallow pond with a section or two of deeper water (4 feet or more) often has a greater variety of wildlife. Small fish can hide in the deep holes where it stays a bit cooler. Placing some structures such as logs or rocks in the deeper holes gives fish and frogs places to hide.

Perches and props

Photographers usually want the most natural looking site possible, so hide any manmade objects. Don't use perches with sawed-off limbs unless you can hide the sawed areas. Don't leave float valves showing in watering tanks. Arrange feeders so they can be hidden or are out of the picture. Use hollow logs as temporary feeders so birds will perch on



This log has been strategically placed to conceal a hose that supplies a water hole.

them and look natural (the food can be hidden in the hollow of the log). While some manmade objects may be visible from the blind, you want the locations where wildlife will be to look natural.

Sometimes a log, branch or rock is placed in the photo area to enhance photos or get animals to stop in a particular spot. If you do this, be sure the object won't hide animals, block light, or clutter the photo area.

Protecting the blind

You should consider fencing out wild hogs and cows from the blind sites. Hogs and cows wallow up the water holes, knock down feeders, perches and blinds, and eat up the feed. When cows or hogs are around, all other wildlife often evacuates. Build the fence far enough away that it cannot possibly be seen or photographed. An electric fence may be the most effective. A car battery and solar panel system can be purchased at most ranch and feed stores.

It is a good idea to have separate sites for photographing birds and mammals so that mammals don't tear up the bird photography sites. That way, if someone wants to photograph wild hogs and other mammals, special blinds will be set up for that purpose.

Serving Your Customers

Most of the photographers who are your potential customers are serious amateurs, with some beginners and some professionals. To successfully market your enterprise, it would be a good idea to understand as much as possible about their needs and expectations. You should also assess the specific opportunities your ranch has to offer and ways to enhance those opportunities.

You might start by reading photography magazines and attending a workshop or two to learn more about photography and the needs of wildlife photographers in particular.

Most photographers want to stay at the ranch or photography site and have the complete outdoor experience—ranch cooking, night sounds (owls, coyotes, paraques, etc.) and stargazing. They want a comfortable bed, a shower, air conditioning and heating, good food, and access to a phone and computer. Groups will want a central room where they can conduct workshops or have discussions during the evening. At mid-day, when they return from the early morning shoot to rest, eat and reorganize gear for the evening shoot, they will want the opportunity to photograph species where any light will work.

They will appreciate having hummingbird feeders and butterfly gardens near the living quarters so they can photograph those species.

Here are some ideas to think about and some items you might have on hand for your customers:

- For film photographers, keep at least ten rolls of 35 mm film, such as Fugi Velvia or Fugi Provia F color slide film, in the refrigerator. This will serve guests who forget their film or run out temporarily. This film can be ordered from photo magazine advertisers like B&H Photo, Inc. or Hunts Photo, Inc. or purchased locally. It will have a long shelf life (6 months or so) if kept in the refrigerator. Local photographers will likely buy what's left over after 6 months so you can replenish your supply without losing any money. Many photographers will want to keep their film in your refrigerator or their own coolers (they may need ice to keep their coolers chilled). Heat ruins film, but this is seldom an issue if the facility is air conditioned. You might also keep one or two 8-packs of AA batteries in the refrigerator, too, since most cameras and flashes depend on them to run. Someone will run out.
- For digital photographers, you should keep a 16-pack of AA batteries in the freezer. Also make sure there are electrical outlets for recharging batteries for cameras and laptop computers (which photographers will use to view and edit photos). Humidity and wet weather may affect equipment, so a drying box may be a useful item to have. This can be a simple, small box with a 100-watt light bulb inside for drying equipment. Knowing where a guest can get service and parts for cameras, especially batteries and memory cards, will be a real help to customers who are staying more than one day.
- A supply of insect repellent will be welcome.
- Photographers will appreciate having a small library of books on birds, plants, reptiles, mammals, amphibians, butterflies and dragonflies for reference. It might also be a good idea to subscribe to *Outdoor Photographer* magazine and have copies available for clients to read at their leisure.
- You will want to provide guests with a brochure about your ranch (with postal and e-mail addresses and the phone number) and a site map showing the locations of blinds. A map for getting to town, with the locations of

hospitals, grocery stores and photo shops, is also helpful. Include emergency phone numbers.

- Freeze plastic bottles of water or sports drink for photographers to carry out to the blinds on hot days.

Whatever your location, you must evaluate its attraction for photographers at all seasons of the year and plan accordingly. In South Texas, for example, you may want to accommodate photographers from October through June. The primary demand seems to be in spring, but your marketing efforts and site could change this. During the other three months, the weather is too hot for photographers to be out and the mammals and birds are molting and look bad.

You should be familiar with the habits of animals in your area so you can recommend the best times for clients to visit. In South Texas, April through early May is the time of peak song bird migration, May/June and October/November are the best months for butterflies, deer are most active and look the best from November to January, and tortoises and horny toads are active from April through June. Evaluate the seasonal opportunities in your area so you can market them specifically.

The ranch manager/owner and ranch workers should develop an interest in and ability to spot potential photo opportunities (nests, concentrations of wildlife or butterflies, active nest cavities in trees and posts, etc.). This can be very helpful to clients who can stay only a short time because you'll be able to guide them to particular spots.

As you develop your enterprise, it may be very useful to hire a consultant to help evaluate your location and recommend the best sites for water tanks, blinds and perches/feeders. A consultant could eliminate much extra work on your part. The consultant should be asked to visit the site again after the blinds have been placed for a while. He or she may need a day or two to photograph at the blinds and give them a final evaluation. You may also invite other photographers to test your blinds and site and offer them free photography opportunities in exchange for advice and promotion. Photographers can also suggest effective ways to advertise your enterprise.

You may not want to have both hunters and photographers at your site at the same time, since some may clash over values and needs. However, many have overlapping interests so remember to cross promote when appropriate.

You should develop a questionnaire to mail to clients who sign up to come to your site. The questionnaire would ask about dietary and medical needs, allergies, etc. It could contain a waiver of rights to sue. It could even ask what species or subjects the client most wants to photograph while at your site. This would help you and the guide plan for the visit. You should also have a simple, short evaluation form for guests to complete before they leave. This will help you know whether guests enjoyed their experience, and whether your site met their expectations or if changes should be made. It will also help you determine optimum price levels.

Instructions for Building a Small, Portable, PVC-Frame Blind

Description

This is a surface blind to accommodate two people. However, it could be constructed over a pit. It has a PVC frame, plywood roof and cloth walls. There are many design variations and personal preferences. Different seasons and species of wildlife may require different blinds or blind settings. Consultants and your own experience can help you find the best designs for your needs. In addition to general plumbing PVC, described below, you may be able to purchase furniture grade PVC that is stronger. Dealers often have additional types of joints as well.

Cost

The cost of materials is approximately \$300, with an additional \$150 for a digital, timed, solar-charged feeder and a water drip system. Labor costs are not included in this estimate.

Construction

The outside dimensions of this blind are about 8 feet long, 5 feet wide (front to back), and 6 feet high. It will accommodate one or two people comfortably. To enlarge it for four to six people, simply build two or more of these frames and place them side by side. If you do this, consider placing them on a slight curve and modifying the ends and roof to make a single blind that is continuously open inside.

If you place the blind over a pit, the pit should be 8½ feet long, 5½ feet wide, and 2½ to 3 feet deep. The pit is larger than the frame of the blind so that you can place the frame into the pit. Inside the pit you will need to build a support frame of 2-inch x 12-inch boards supported by posts inserted into the ground at the corners and center of the blind. You

may also want to construct steps or a ramp. Instructions and costs for building a pit are not included here.

Materials

- 1¼-inch-diameter (exterior) PVC
 - Four 7½-foot-long sections
 - Four 5-foot-long sections
 - Six 6-foot-long sections
 - Twenty 3-inch-long sections
- Thirty-two 1¼-inch-diameter (exterior) PVC “T” fittings
- 6+ yards of 5-foot-wide camouflage cloth (“mosquito netting”)
- 4 yards of 4+-foot-wide nylon shade cloth or solid camouflage cloth
- Two 4-foot x 8-foot sections of ¼-inch plywood for roof (2 more sections for back if using wood instead of shade cloth)
- 200 clothes pins
- 200 black plastic slip ties
- 100 feet of ¼-inch nylon rope or elastic cord
- Four heavy-duty metal stakes
- Twelve ¾-inch eye screws
- Four rubber bungee cords
- PVC glue

Note: After building this blind, you may decide you want others with sturdier frames. You can do this by adding PVC cross sections or by constructing the frame from wood or metal.

PART 1: Build one section of frame for the top; then build the frame for the bottom and connect the top and bottom together with the vertical support sections.

- Attach a T to each end of two 5-foot pipe sections. Align the Ts in parallel.
- Attach a T to each end of two 8-foot pipe sections. Align the Ts in parallel.
- Lay out these four pipe sections on the ground with the 5-foot sections in parallel and the 8-foot sections in parallel to form a rectangle.
- Using 3-inch-long pipe sections, connect the T sections together with the T joints aligned perpendicular to each other and the open end of the 5-foot section T pointing straight up.
- Glue all joints in place.

Note: There will be an open end of the T on the 8-foot sections facing to the outside when you are done.

- Repeat to build two identical rectangular frames.

PART 2: Insert the 6-foot pipe sections into the open end of the T on the 5-foot sections and align vertically. Glue all four vertical pipes in place

PART 3: Drill ¼-holes in the PVC to allow for stringing the curtain cord. This may be done in place of or in addition to installing the ¾-inch eye screws in the plywood roof from which you can attach the rope.

PART 4: Attach the camouflage or shade cloth around the PVC pipes using plastic slip ties. Or, fasten the cloth to the frame with ¼-inch bolts with washers. To avoid having openings at the corners, wrap the cloth around the back corner to extend 6 inches toward the front. Note: Nylon shade cloth is very strong and can support the use of thin plastic slip ties. Many other cloth materials are not strong enough to use slip ties; in this case you may need install a curtain rod or rope along the back and sides and sew a loop in the top and bottom edges of the cloth to allow you to slide the cloth onto the curtain rod/rope.

PART 5:

- Place one 4-foot x 8-foot plywood sheet on the roof frame at the rear with a 12-inch overhang on the back side of the blind; center it from side to side. Drill ¼-inch holes in the plywood along either side of the pipe to allow for placement of the plastic ties. Attach the plywood roof to the frame with ties.
- Attach the second sheet of 4-foot x 8-foot plywood over the first, with about 12 inches of overhang over the first plywood sheet and with a 12-inch overhang on the front. Drill ¼-inch holes in the plywood along either side of the pipe to allow for placement of the plastic ties. Attach the plywood roof to the frame with ties. Note: The 12-inch overhang provides extra shade and rain protection. If you later find you do not want the overhang you can cut it off. Or you can create less overhang at the start.
- Seal the slip tie holes with caulking if desired.

PART 6:

- Install cord (or wire) for hanging camouflage curtains on the front.
- Attach black or very dark nylon shade cloth to the inside back and sides of the frame. Use a double layer and fasten the cloth tightly with plastic ties so it does not flap and acts like a wall.

- From the inside and/or from the outside, attach solid camouflage cloth to the frame as needed to block light. Or, you can do this by installing a tight cord or rod on the top and bottom of the frame and attaching the cloth with clothes pins to the cord or hanging it from the rod like a curtain. Using both the nylon shade cloth and a solid camo cloth gives you the option of allowing more airflow through the blind to keep it more comfortable in hot weather and keeping out the wind in colder weather.

The solid cloth can be added to either the inside or outside of the back wall by sewing a large loop along the edge of the cloth and sliding a ½-inch-diameter metal conduit pipe through the loop to act as a curtain rod. The rod can then be attached to the overhang of the roof or to the frame with plastic slip ties. The bottom edge can be fitted with a similar rod and tied to the bottom of the frame poles. Hanging it on the inside will make it easier for the user to adjust.

Do the same for the sides. Then, if desired, cut one 12-inch x 6-inch opening in the side at the photographer's eye level. Cut only the sides and bottom edge and leave the flap in place. It can then be pinned up as needed.

PART 7: Insert the four stakes into the ground near the outside corners of the blind. Use the bungee cords to anchor the frame to the stakes.

PART 8: Set up feeders, water and perches after confirming the best placement for them according to the patterns of sunlight and shadow and their intended use.

PART 9: Install chairs, hangers, hooks, carpeting, etc., for comfortable, quiet use.

PART 10: Install livestock/feral hog enclosure fencing around the blind and feeder/water area if needed. Be sure that no part of the fence will show up in photographs. A battery-charged electric fence may be the most effective.

PART 11: Test the blind. Sit in the blind with a camera and tripod at the time of day it will get the most use and take pictures. This step is important because it will help correct any missing details. Once you have tested the blind, invite a photographer to test it for you. Then, when you are satisfied, kick your marketing effort into gear and enjoy your new enterprise! Good luck.

For assistance in evaluating and developing this or other nature tourism or agricultural diversification operations, please call your county Extension agent or visit the Texas Cooperative Extension Web site <http://naturetourism.tamu.edu>. A free financial planning computer program is available from this site.

Texas Cooperative Extension publication B-6147, "Nature Tourism: Evaluating Enterprise Feasibility," is available at <http://tcebookstore.org>.

