BUILDING YOUR OWN
'DEER FACTORY'

Laying Out Your Whitetail Habitat

Providing deer with all of the habitat elements they need, and then tying those elements together in the right way, is a big part of success in management. Here's how to do it on your property.

by Dr. James C. Kroll

Of the many factors affecting your land's ability to produce more and bigger whitetails, none is more important than habitat quality. In fact, improving the habitat is the single most crucial step in turning the average piece of property into a true "deer factory."

As detailed in our last issue, habitat consists of several elements, the most critical of which are *cover*, *forage* and *water*. Ideally, all of these needs are being met on your land right now. If they aren't, you need to remedy the situation as best as is possible. This process is one we'll be discussing in detail this month and in future issues as well.

But just having the necessary elements on your land isn't the entire story, either. Even if food, cover and water *are* present, do they fit together in a way that makes your land a favorite place for local deer to live? And do the elements tie together in a way that makes the deer reasonably huntable? If the answer to either question is "no," your next step is to engage in a process I refer to as "landscaping" for deer.

The whitetail research I've done over the last 30 years has revealed that, for management purposes, the minimum land-unit size generally is around 80 acres. This obviously doesn't mean that a deer spends its entire life on 80 acres, but it is possible to satisfy all of a deer's daily needs on that amount of land. Thus, by viewing your land as 80-acre blocks — or even a portion of this unit size, if you control less than 80 acres — you can take steps to maximize the production of your "deer factory."

ANALYZING HABITAT

As discussed in the July issue, the first step in improving deer habitat is evaluating the area from a deer's perspective. This traditionally has been done by simply walking around the property, though there are other ways to do it as well.

The same aerial photographs and topographic maps used for hunting deer also can be a big help in analyzing and managing deer habitat. Aerial photos in particular can give you an edge in evaluating your land.

Most of us are already somewhat familiar with black-and-white aerial photos, but for managing deer *(Continued)*

Whitetails use drainages as natural travel corridors all year long. If possible, arrange your property so that prime food sources and cover areas are close to those "deer highways." Photo by Mike Biggs.

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habitat, I prefer to use *color infrared* photos. These generally offer even more useful information about the habitat, because they help you to distinguish elements that would be difficult to tell apart with black-and-white or even standard color photos. (See the sidebar on Page 45 for more about color infrared photos and where you can get them.)

BEGINNING THE ANALYSIS

The first step in evaluating deer habitat on your property is to locate the various elements. As you do so, mark them on a map of the area.

To illustrate this concept in simplified form, I've included a habitat map (Figure 1) showing the layout of a real 100-acre property. The areas shown in green represent hardwood stands; red areas are pine stands; gold areas are a mixture of hardwoods and pines; blue areas are waterways (ponds and streams); the brown area is a pocket of brush; and the white areas are fallow fields.

The landowner lives in a house near the tract's southeast corner (lower right). A farm-to-market road runs along the southern boundary (bottom edge of the property). For many years, this property was used for cattle and corn production; however, those activities ended recently, when the current owner purchased the land. The previous owner sold some timber about five years prior to the sale of the tract,

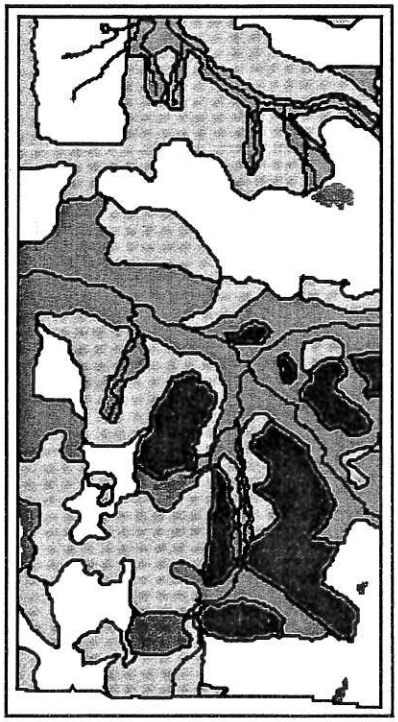


FIGURE 1

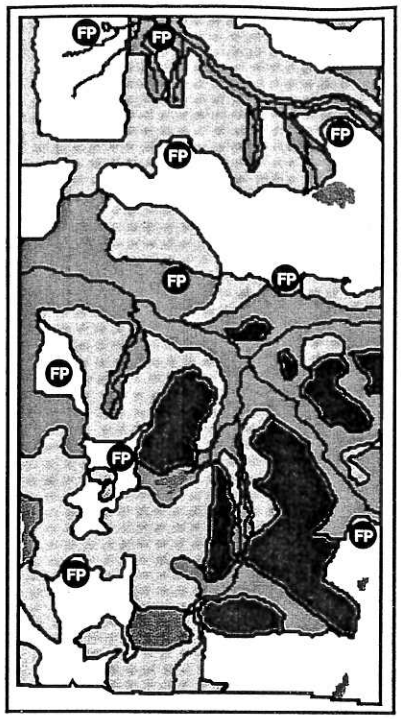


FIGURE 2

and those are the areas shown in red (planted to pines).

WHAT DOES THE MAP SHOW?

Let's analyze the 100 acres on a "landscape" level, keeping in mind that our primary objectives are to do the following: (1) increase deer production on the property; and (2) improve the "huntability" of the habitat (hunters' ability to harvest deer there during legal shooting hours).

Remember, a whitetail's basic habitat needs include food, cover and water. With those in mind, what do we have to work with here?

Actually, there's great potential for turning this property into a "deer factory." Although the habitat features weren't laid out with wildlife in mind, the property is well "landscaped" for deer. Even if I'd been involved in the layout on the front end, I'd have done little different. But there still are things we could do to make this tract significantly more productive and huntable.

We realize that no deer is going to spend all of its time on 100 acres. However, we want to do what we can to limit a deer's need to travel off this tract. To do so, our first and most obvious need is to greatly increase the amount of high-quality forage available.

At present, there are no prime year-round food sources on this

property. While the many fields (now abandoned) should provide some nutritious deer food during part of the year, without conscious effort on the part of the manager, there will be times when good forage is in short supply. Something is lacking, and in this case, that "something" is a series of food plots.

Excellent locations for food plots abound on this property, and I've marked several (FP) on the second map (Figure 2). How did I decide where they should be placed? By asking myself one basic question: "If I were a deer traveling through this property, where would *I* go?"

The complex stream system (blue lines) crossing the tract in two basic areas offers deer excellent travel corridors. The positioning of the food plots should be aimed at taking advantage of this, allowing deer to move to and from these plots without having to abandon their natural travel tendencies.

The benefits of such planning are twofold. First, strategically placed food plots will be more heavily utilized by deer. Second, such plots are more likely to receive daytime use — especially by mature deer — than if they're located far from natural travel corridors. In short, this is an example of "landscaping" for deer: putting habitat elements where they can do the most good for both the herd *and* the hunters.

Of course, every piece of land is unique. So, once you've completed a habitat map of your property, take a critical look at it, trying to identify elements that would limit deer use.

You might find that the amount of cover is a limiting factor, especially in areas that are heavily agricultural. By contrast, in the big woods, a tract might have ample cover but be short on forage. And in a region often plagued by drought, there even could be serious concerns about the availability of surface water.

THE 'BIG PICTURE'

Again, having adequate deer forage, cover and water on your property is only part of the story. It's also critical that you assess how these habitat elements tie together.

For example, if all of the good cover is along the edges of your land, with the center being devoid of any place for whitetails to find shelter from predators and/or bad weather, the heart of your property isn't likely to serve as a sanctuary for many deer. That means it could take only slight hunting pressure to push "your" deer onto neighbors' lands, where you have no control over what happens to the animals.

Thus, another critical question to ask yourself is "How does the habitat on my neighbors' properties affect the deer using my land?" *Never limit habitat analysis strictly to your own property.*

Although you might not be able to access neighbors' properties on foot, an aerial photo still will reveal much about the features of surrounding lands and can tell you much about how deer likely are using those areas. This knowledge will help you not only manage your own land but hunt it as well.

Again, our first example shows a piece of land that needs only minor adjustments to make it a nearly perfect "deer factory," even though its size is less than that of a deer's home range. By contrast, our second example (Figure 3, a black-and-white aerial photo) shows a habitat situation that isn't as easy to remedy.

This property is made up mostly of old hardwood stands. These extensive stands consist of trees more than 100 years of age, with virtually no understory beneath the heavy canopy. Although providing summer shade (thermal cover) and an excellent acorn crop each year, the mature timber offers little else of benefit to deer.

The property is seriously lacking in winter thermal cover or screening (escape) cover, and there's a shortage

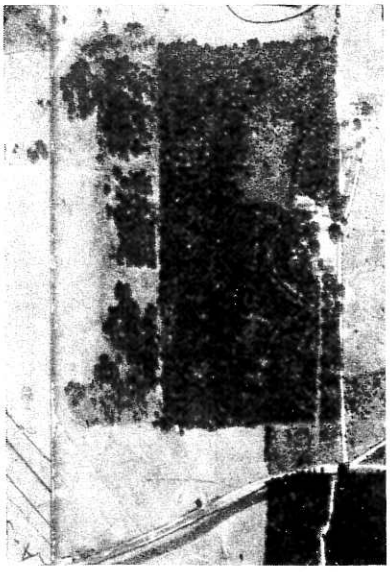


FIGURE 3



of forage for most of the year. A small cutover brush area offers some cover and summer food, and an old field (OF) on the property's southeast corner has some native deer forage growing in it during the warm season. Even so, a lack of year-round food and cover clearly is limiting the land's productivity. This tract needs significant habitat improvements if it's to become a real "deer factory."

My suggestions for helping it are shown in Figure 4. First, we need to get more sunlight to the forest floor. We can do that with a planned timber harvest in three strategically placed areas (H1, H2 and H3).These harvests should be timed to allow each area to grow adequate forage before the next area is cut. (This probably would put the timber cuts 7 to 10 years apart.)

In addition, I would clear food plots at the three locations shown (FP). As on the other property we analyzed, this would allow deer to feel secure in traveling up and down the creek drainage (white line) to feed. With such a plan, we could not only boost nutrition but also funnel

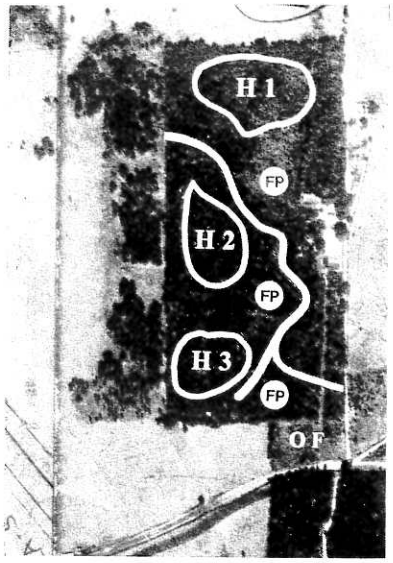


FIGURE 4

deer movement through the center of the tract along a northwest-southeast line. As we know, whitetails like to use drainages as travel corridors, so it only makes sense to put prime feeding locations near them.

But what about the neighbors? Take a look at Figure 5 on this page, which shows not just the managed tract but the neighboring properties as well. Notice that very little whitetail cover surrounds the managed tract, making it virtually an "island." There are few, if any, good travel corridors through which deer can move onto the 100 acres.

However, we can remedy this problem. For example, with a little effort on the property's south border, we can provide a travel corridor to habitats on the block of timber to the south. The old field (again, marked as OF in Figure 4) should be planted to pines (P), which would soon grow tall and thick enough to provide screening cover. This would give the deer a potential new travel corridor for entering the property, even though a public road cuts through the area.

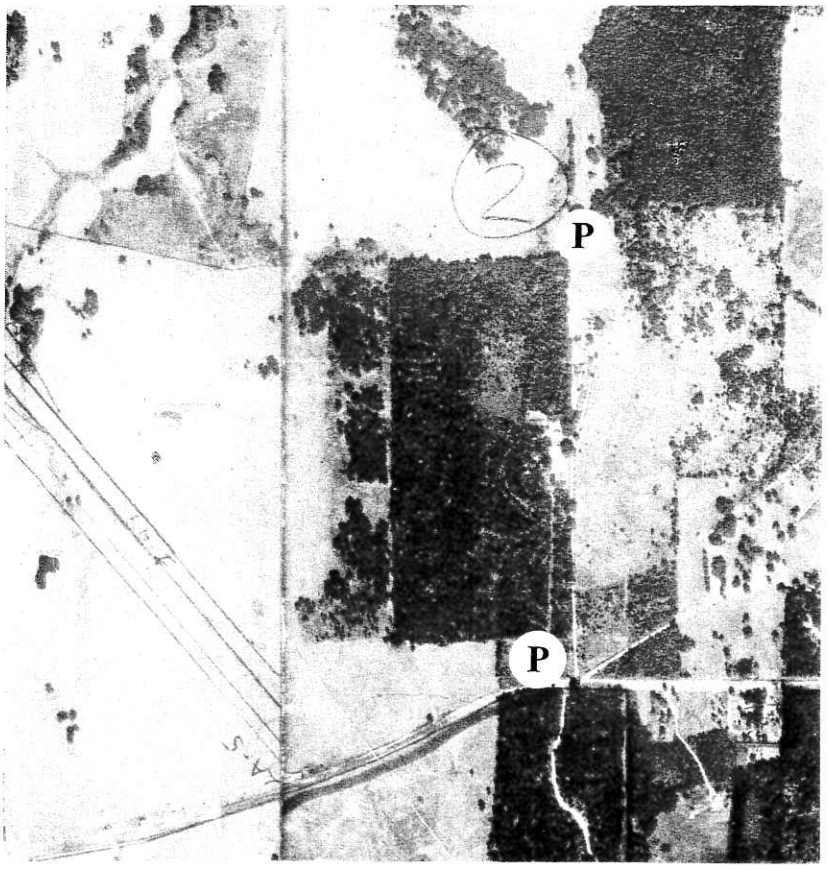
Another suggested pine planting (P) is indicated just off the northeast corner (upper right of photo). This added cover would connect woods on the 100-acre property to woods lying farther to the northeast. But this potential planting would have to lie outside the borders of the managed property, so our landowner can't do it alone.

What's the answer? Cooperation! By offering to share in the cost and effort of planting the pines, the owners of these two properties could create a "cover connection" linking their woods. This would make each of their properties "bigger" from a deer's perspective. Now we're *really* starting to think on a "landscaping" level!

* * *

If some of this seems confusing, don't fret. Over the coming months, we'll look at all sorts of ways to improve your deer habitat, providing you with numerous real-world examples of ideas that work. In the meantime, acquire an aerial photo of your land and spend some time logically thinking about how the various elements of the habitat relate to each other — not only on your property, but on neighboring lands as well.

As you're evaluating your current habitat, it's also time to start thinking about how to develop a year-round forage-management strategy that will work on your land. (Having good food sources is one of the keys to growing more and bigger deer and then keeping them in the area.) Turn to Page 46 for the first part of a series on this important topic.



(FIGURE 5) This broader view of the second property shows how poorly its deer habitat is connected to that of surrounding tracts. Pine plantings at the southeast and northeast corners (as shown) would help.

WHY USE COLOR INFRARED AERIAL PHOTOS?

Among the more useful tools for evaluating deer habitat are color infrared aerial photos. But what are they, and what makes them so good?

Infrared light is of a wavelength too long to be seen by the human eye. However, special film can "see" this invisible light and record its unique "signature." The aerial photo below (left) was shot using this type of film.

With infrared film, variations in the temperature show up as different colors, and these can be used to distinguish among various habitat features. For instance, on regular color film, all living trees look "green" from above, but on infrared film it's easier to distinguish hardwoods from conifers. It's also a snap to spot old fields, swamps and other features.

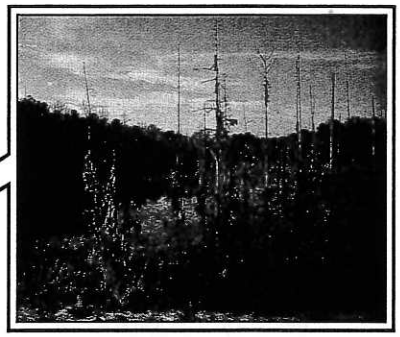
The trick is knowing how to interpret the color shifts you get on infrared film. For example, in the accompanying photo, pines and other conifers show up as varying shades of red. The deeper the red, the younger (in general) the pines. Also, the young conifer stands appear to be more dense than older ones. Hardwoods, on the other hand, appear as shades of blue or gray.

Water features, including swamps, ponds and wetlands, show up as shades of deep blue or black. Brush and weed fields are lighter in color.

The smaller photos at right (taken with regular color film) show how three areas in the infrared photo appear from ground level. The best way to learn what various features look like is to carry an infrared photo around your land and compare what's on the photo to what you see on the ground. With practice, you'll be able to identify the "signatures" of various habitat components with ease.

Next month, Randy Templeton will begin a series on using black-and-white aerial photos for finding buck travel corridors. He'll also explain in detail how to figure out which photo(s) you need and then acquire them. In the meantime, for information on ordering photos, contact: Aerial Photography Field Office, 2222 W. 2300 South, P.O. Box 30010, Salt Lake City, UT 84130-0010; (801) 975-3503.

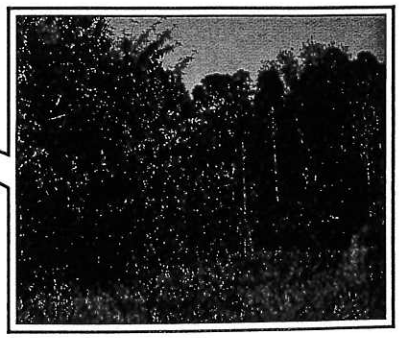




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