2025 National Capital Area Council
College of Adventure
University of Scouting

EAC202
Rails-to-Trails, Bike Treks, Mountain Biking

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Bike Terms:

Mountain Bike – heavy duty bike with fat knobby tires designed for dirt trails
Crossover or Hybrid Bike – bike with medium knobby tires and medium frame for light duty mountain biking and tour biking
Touring Bike – medium duty bike with tread tires and rack or bags for carrying equipment for touring primarily on hard surfaces
Racing or Road Bike – light weight hi-tech frame and skinny tread tires for racing on hard surfaces
Cruising – heavy duty bike with balloon tires
Rail Trail – former railroad bed converted to a bike trail – often paved
Single Track – one way trail one bike wide
Double Track - two trails that run parallel to each other like a dirt road
Technical Ride – mountain biking over obstacles such as logs and boulders
Gravity Check – a fall
Wipe Out – crashing
Yard Sale - a horrendous crash that leaves all your various "wares" -- water bottles, pump, tool bag, etc. -- scattered as if on display for sale
Mud Diving - what happens when a bike slows abruptly in mud, throwing the rider into wet goo

Safety Considerations:

Bike Helmet – BSA requires youth and adults to wear a bike helmet when riding a bike anytime on any surface
Riding at night – law generally requires that you have a headlight and a taillight and rear reflector
Ride with traffic and obey traffic signs including stop signs
Pedestrians have right of way on sidewalks, rail trails, and elsewhere
Wear light colored and wear reflective clothing when riding in low light and at night
Riding Single File – keep a good distance between you and the bike ahead
Carry - bike tool kit, spare inner tube, pump, and a spare chain repair link
Carry - water, first aid kit, cell phone, a map (GPS optional)
Let someone know where you are going and when you will be back
Riding alone is Risky and dangerous

Mountain Biking Resources

Livestrong Website – video clips on a variety of bike topics including how to adjust your bike seat and handlebars- http://www.livestrong.com/sports/cycling/videos
How to Fit a Bike to You - http://www.peterwhitecycles.com/fitting.htm
Learn how to find the most comfortable and efficient riding position for you.
Mountain Bike Fitting and Sizing – http://www.mountain-bike-world.com/mountain-bike-fitting.html
Mountain Bike Information including: Buying a Bike, Maintenance and Repair, and Trail Riding Skills and Techniques – http://www.mountain-bike-world.com

Bike Trail Finder - http://www.trails.com:/explore/biking.asp
My Bike Site - http://www.mybikesite.com/virginia
Mountain Bike Review - http://www.mtbreview.com/trails/Virginia_name.html
Bike Washington Online Area Guide - http://bikewashington.org
Bicycling with Broken Claw - http://www.brokenclaw.com/biking/biking.html
The Bike Lane – http://www.thebikelane.com/index.html
Pedal-n-Spoke - http://www.pedalnspoke.com
Performance Bikes - http://www.performancebike.com/index.html
Mid-Atlantic Off Road (Bike) Enthusiasts - http://www.more-mtb.org
West Virginia Rails-to-Trails - http://www.wvrtc.org/index.html
✓ Rails-to-Trails Conservancy - http://www.railtrails.org

Some Great Bike Trails:
Virginia Creeper, Abington, VA - http://www.vacreepertrailbikeshop.com
http://www.creepertrailinfo.com
Greenbrier Rail Trail, Cass, WV - http://www.greenbrierriverrailtrail.com
Green Ridge Forest Bike Trail (MD) –
http://www.dnr.state.md.us/publiclands/greenridgebike.html
C&O Canal (Cumberland, MD, to Georgetown) - http://www.bikewashington.org/canal
The Great Alleghany Passage (152 miles from the western end of the C&O in Cumberland, MD, to Pittsburg, PA making the entire C&O Canal Trail plus the Great Alleghany Passage a 338 mile long trail) - http://www.atatrail.org
W&OD Rail Trail - http://www.wodfriends.org/index.html
- http://www.geocities.com/Yosemite/Trails/9401/index.html
Capital Crescent Trail (Washington, DC) - http://www.cctrail.org
Mount Vernon Trail - http://www.bikewashington.org/trails/vernon/vernon.htm
Fairfax Cross County Trail - http://www.co.fairfax.va.us/parks/cctinfo.htm
- http://www.farifaxtrails.org/cct/index.html
Wakefield Park Trail - http://www.co.fairfax.va.us/parks/cctmap-wakefield.htm
Lake Accotink Park Trail – http://www.co.fairfax.va.us/parks/accotink/images/trailmap.gif
Fountainhead Regional Park Mountain Bike Trail (technical trail) –
http://www.nvrpa.org/fountainhead.html

Books and Maps:
Rails-to-Trails: Maryland, Delaware, Virginia, West Virginia;
The Official Rails-to-Trails Conservancy Guidebook
Mountain Biking to Washington, DC/Baltimore Area, by Scott Adams/Martin Fernandez
Mountain Bike! Virginia, A Guide to the Classic Trails, by Randy Porter
ADC The Map People Washington DC Regional Bike Map
Maryland Bicycle Map, Maryland Department of Transportation
✓ "On the Canal" DVD by John Urman - http://www.filmbaby.com/films/1537
C&O Canal Map, Maps 1-4, With Canal Lingo, by Paul McDermott/Thomas Rabenhorst
The Potomac River and the C&O Canal Five Colorful Strip Maps
by the Interstate Commission on the Potomac River Basin (310) 984-1908)

How to Fit a Bicycle to a Rider - excellent resource
https://www.peterwhitecycles.com/fitting.php

Fairfax County Bike Trails Interactive Map and Bike Resources
https://www.fairfaxcounty.gov/transportation/bike/map

Before reading this article, please be aware that I don't do bicycle fitting any longer and I don't discuss fitting issues with people who are not in the process of buying a bicycle from Peter White Cycles.

How to Fit a Bicycle

by Peter Jon White

Overview

Bicycle fitting is a subject most people find quite mysterious. Fitting systems with charts and graphs, computer software, measuring devices and "rules of thumb" make for a lot of confusion. But I believe it's really quite simple. Bicycle fit involves compromises. Compromises between comfort and performance, quick acceleration and handling stability, top speed and "taking in the scenery".

Your body's position on the bike affects how you ride. It affects how much power you can efficiently deliver to the pedals. It affects how comfortable you are on the bike. A position that is more comfortable may not allow you to put as much energy into moving the bike forward as a less comfortable position might. How do you decide where to position your body on the bike?

Ask yourself, "What do I want to do with my bike?", "Why am I riding?". A track sprinter is not the least bit concerned with how comfortable he is sitting on the bike. During the race, (which may last for less than a minute), he may only be seated for 5 or 10 seconds. A long distance tourist traveling coast to coast across the USA might spend 5 to 12 hours a day in the saddle, day after day. He is probably far more concerned with being comfortable and enjoying the scenery than with going as fast as he can.

This article relates only to traditional road and cross country mountain bicycles. I know next to nothing about recumbent bicycles and have absolutely no advice to offer regarding recumbent fitting. Nor have I any experience using "aero bars", which allow the rider to rest his forearms on the handlebars.

Let's get started

Your body contacts the bicycle in three areas; your hands, your seat, and your feet. The relative positions of feet, seat and hands determine your comfort and efficiency on the bike. There are several variables that determine these positions; crank length, distance from crank center or bottom bracket to saddle, saddle angle, seat tube angle and saddle offset, distance from saddle to handlebar, relative height of saddle and handlebar, handlebar width, and handlebar drop on road style handlebars. I'll discuss each of these variables.

Crank Length

Crank length determines the diameter of the circle that the pedals move in. The larger that circle is, the more flexion of your knee and thigh muscles will be needed to turn the cranks. Your thigh muscles cannot exert the same force throughout their range of motion. This is very easy to demonstrate. If you squat down so that your knees are fully bent and lift yourself up, say, five inches, it takes a good deal more effort than it would to squat down just five inches from standing straight and then lift yourself back up. At the full squat position, your muscles can't put out the same power as when your knees are just bent enough to drop you down five inches. So if you had to choose between a crank length that had your knees bending through their entire range of motion and a length that only required, say, 20 degrees of flexion at the knee, you would choose the shorter crank. That crank would have your muscles working through a more efficient range of motion. You would avoid having to flex your knees enough to bring you into an inefficient range of motion.

So how long should the cranks be? Well, that's a good question. I wish I had a good answer but I don't. It should be obvious that a 5' 2" rider would not want to use the same length crank arms as a 6' 7" rider unless they somehow managed to have the same leg length (highly unlikely). Some research has been done to determine the optimum percentage of leg length to crank length. I doubt that there is an optimum percentage that would apply to all people. One writer in a major magazine article quite a few years ago claimed that after considerable testing with many different riders, 18.5% of the distance from the top of the femur to the floor in bare feet should be the crank length. You can find the top of the femur pretty easily. It's 5" to 6" below your hip bone, and moves rearward when you raise your knee. After reading this I promptly changed from the industry standard 170mm cranks for road bikes to 175mm cranks. There was an immediate improvement in power and endurance. I began using this formula when recommending cranks to my customers. So far, I haven't gotten any complaints. But of course that doesn't mean my customers wouldn't be as happy or happier with some other length. And I must admit that I have never tried still longer cranks than 175mm for enough time to tell if I would be even happier with them.

The top of the femur measurement ignores differences in legs themselves. Differences in the proportion of calf length to thigh length should affect the optimum crank length. A rider with longer thighs and shorter calves would use a longer crank to get the same flexion at the knee as a rider with short thigh and long calf. Of two riders with the same body proportions, one might prefer to pedal at a faster cadence. That might favor a shorter crank length. And perhaps even two riders with identical skeletal proportions would find after testing that they required different crank lengths to achieve maximum performance

due simply to differences in their muscles.

Trying different cranks to find the optimum length would be time consuming and expensive, but I believe it is the only way to determine the correct length for any individual, assuming there is a correct length. It would be nice to have a crank with many pedal threads at various lengths to test. But I know of no such thing being made and I lack the ability to make one! Of course, some riders with multiple bikes report being just as happy on one crank length as another. Go figure! So, for lack of a better system, I'm staying with the 18.5% guide for my customers until something better comes along. It hasn't failed yet.

Note: As of August, 2007, we have here at Peter White Cycles a special crank with adjustable length that we use while fitting cyclists to our bikes. And, if you would like to come by and have it installed on your bike for determining your best crank length, just call ahead for an appointment.

In the United States, it has been difficult and expensive to obtain cranks shorter than 165mm or longer than 175mm. But a French company, Specialites TA has been making high quality cranks in lengths of 155mm through 185mm for many years. In order to offer my customers better fitting bicycles, I've decided to sell these cranks. See my web page; http://www.PeterWhiteCycles.com/carmina.asp for details.

Saddle Tilt

In order to fit a bicycle, you need a saddle you can sit ON. That may seem too obvious to even mention. But sadly, most bikes seem to be sold with saddles designed by people who have never ridden a bicycle. In order to ease the pain of using these implements of torture, people often angle the saddle with the nose down. This makes it impossible to sit ON the saddle. You tend to slide forward. You end up pushing against the handlebar just to keep yourself on the saddle. Get yourself a saddle you can sit on so that your pelvis is resting on a level surface. For most saddles that would put the nose of the saddle a bit higher than the rear. Women's saddles should be wider than men's since a woman's pelvis is wider. Many women's saddles now have a cutout or low density foam section in the center to take pressure off the pubic bone while allowing a level saddle position. The closer you can get to a level platform, the easier it will be to find the best fore-aft position of saddle and handlebar.

Saddle Height

Once the crank length is determined, (by whatever means), the saddle should be set at a nominal height. There is no objectively determined ideal saddle height for any rider based on leg length alone. Some riders naturally pedal toes down, while others have the foot in a more level position. For starters, sit on the saddle with one leg hanging free and your hips square, (not tilting to either side). Set the saddle high enough so that your other heel can just touch the pedal with your leg straight, and with the pedal at the bottom of the stroke, in line with the seat tube. For most people this results in a saddle height that leaves some bend in the knee at the bottom of the pedal stroke, when you're pedaling with the balls of your feet over the axle of the pedals. It also should prevent you from having to rock your hips through each crank rotation. This gets you close enough to your optimum saddle

height that you can go through the rest of the fitting process and fine tune saddle height later. Any later saddle height adjustments shouldn't be enough to throw off the other adjustments other than handlebar height, which is easily changed.

The Fore-Aft Saddle Position

Now we get to what I think is the most important part of fitting a bicycle, the fore-aft position of the saddle. Once you get this right, everything else is easy. This position is determined more by how you intend to use your bike than by anything else. If you look at a typical bike, the saddle is behind the crank center, or bottom bracket. There's a frame tube (the seat tube) running from the cranks to the saddle, and it's at an angle. That angle partly determines the fore-aft position of the saddle relative to the cranks and pedals. That fore-aft position determines how your body is balanced on the bicycle. Your balance determines how comfortable you are, and how efficiently you can pedal the bike.

Stand up straight in front of a mirror and turn to the side. Look at yourself in the mirror. When standing straight your head, hands, seat and feet are all fairly close to being in line with each other. Now bend over at the waist. Notice that not only has your head moved to a position ahead of your feet, but your rear end has moved behind your feet. If this were not the case, you would fall forward. Your seat moves back when you bend at the waist to keep you in balance.

Your torso needs to be leaning forward for two reasons; power output and aerodynamics. With an upright torso, you can't use the gluteus muscles to good effect. Also, you can't effectively pull up on the handlebar from an upright position. An upright torso is also very poor aerodynamically. When cycling on level ground, the majority of your effort goes against wind resistance. The easier it is for your body to move through the air, the less work you'll have to do. With your torso closer to horizontal, you present less frontal surface to the air and don't have to work as hard to maintain a given speed.

Obviously, the most aerodynamically efficient position may not be the most pleasant position to be in for several hours on a cross country tour. So there's a tradeoff. As you move to a more horizontal position, the saddle needs to be positioned further to the rear to maintain your body's balance, just as your rear end moves to the rear as you bend over while standing. It so happens that racers are more inclined to use a horizontal torso position than tourers, and racers are more concerned with having the handlebars further forward to make climbing and sprinting out of the saddle more effective.

If a bicycle had the saddle directly over the cranks, you wouldn't be able to lean your body forward without supporting the weight of your torso with your arms. Because the saddle on a typical bicycle is behind the cranks, your seat is positioned behind your feet and your body can be in balance. Try this test. You'll need a friend to hold the bike up, or set it on a wind trainer. Sit on your bike with your hands on the handlebars and the crank arms horizontal. If you have a drop bar, hold the bar out on the brake hoods. Try taking your hands off the bar without moving your torso. If it's a strain to hold your torso in that same position, that's an indication of the work your arms are doing to hold you up.

For starters, I like to put the saddle in the forward most position that allows the rider to lift his hands off of the handlebar and maintain the torso position without strain. You should not feel like you're about to fall forward when you lift off the handlebar. If it makes no

difference to your back muscles whether you have your hands on the bars or not, you know that you aren't using your arms to support your upper body. If you are, your arms and shoulders will surely get tired on a long ride. But this is a starting position. Remember that bicycle fit is a series of compromises.

So what's being compromised? Power. There's a limit to how far you can comfortably reach to the handlebar while seated. If the saddle is well back for balance, the handlebars will need to be back as well. But to get power to the pedals while out of the saddle, it helps to have the handlebars well forward of the cranks. Particularly when climbing out of the saddle, the best position tends to be had with a long forward reach to the bars. You can tell this is so by climbing a hill out of the saddle with your hands as far forward on the brake lever tops as you can hold them, then climbing the same hill with your hands as far to the rear as you can on the bars. Chances are you can climb faster with your hands further forward. So you need to find the best compromise between a comfortable seated position and reach to the handlebar, and a forward handlebar position for those times when you need to stand. Only an inch or two in handlebar placement fore-aft can make a big difference while climbing. That same inch or two in saddle position can mean the difference between a comfortable 50 mile ride and a stiff neck and sore shoulders!

As you move the saddle forward from that balanced position, you'll have more and more weight supported by your arms, but you'll be able to position the handlebars further forward for more power. The track sprinter has the frame built with a rather steep seat tube angle, which positions the saddle further forward from where the tourer would want it. But again, the track sprinter spends very little time in the saddle.

If you can't move your saddle forward enough or backward enough for the fit you want, don't despair. Different saddles position the rails further ahead than others, giving more or less saddle offset. Seatposts are available with the clamps in different positions relative to the centerline of the post.

So, how do YOU want to balance on YOUR bike? Do you want to emphasize speed and acceleration? Do you care mostly about comfort and enjoying the scenery? The answers to these questions determine how you position the saddle, not some computer program or someone's system of charts and graphs. How your best friend fits his bike should have no bearing on what you do even if he has exactly the same body proportions as you. YOU know why you ride a bike. Only YOU know what compromises you are willing to make in order to achieve your purposes on a bicycle.

You may have a bicycle for short fast rides, and another for long tours. Just as the two bikes will have different components so as to be well suited for their purposes, so might the fit be different. The rider hasn't changed. You are still you. But your purpose has changed. The light, fast bike for short rides will likely have a more forward and lower handlebar position than the tourer. And so the saddle may well be further forward too.

As you move the saddle forward or rearward, you are also changing the effective saddle height, relative to the cranks, since the saddle rails are usually not perpendicular to the seat tube. So be prepared to change the seat post extension as you adjust the fore-aft saddle position; lowering the saddle as you move it back to maintain the same leg extension, and raising it as you move the saddle forward.

What about knee over the pedal axle?

Most fitting "systems" specify that some part of your knee be directly over the pedal axle at some alignment of the crank, usually with the pedal forward and the crank horizontal. This is pure nonsense. Imagine two riders, almost identical, but one rider's knees are 1 inch lower than the other's. In other words, the thigh bones of one rider are 1 inch longer than the other, and his lower legs are 1 inch shorter. Everything else about these two riders is identical, including overall height, torso length, arm length and weight. If you position the saddle such that the knee is directly over the pedal axle, the rider with the shorter thighs must have his saddle a little under 1 inch further forward of the other rider. It would be exactly 1 inch if his thigh was horizontal at that pedal position, which it isn't likely to be.

But with the saddle positioned forward, the rider with shorter thighs now has more weight that must be supported by his arms, all because of this arbitrary rule about having your knee over the pedal axle. This makes no sense. What matters is your weight distribution fore and aft, and that's determined by the fore-aft position of the saddle relative to the cranks.

Handlebar Position

Next, where does the handlebar go? Just like the saddle, it all depends on what it is you're doing on a bike in the first place. The further forward the bar, the more power you will have standing and accelerating, the better the aerodynamics and high speed control. The lower the bar, the more you can pull up under hard acceleration and the better the aerodynamics. With the bar closer to you and/or higher, you can sit more upright and take in the view.

I like to use an adjustable stem that my customers can use for a few days to try different positions for a long enough time to be meaningful. But what about a starting point? For riders with drop bars, if you place your hands down in the drops at the forward most position, (the point that allows you to easily reach the brake levers), then bend your elbows enough that your forearms are horizontal, your elbow would be at a ninety degree angle for a good starting point. From there, try moving the bar in one half inch increments forward and back to find the best reach for you. Most people are quite comfortable just with the ninety degree elbow position. But that doesn't mean it's right for you. And of course this isn't a position you'd want to spend much time riding in, except on the occasional banzai descent down a mountain pass!

Racers generally end up with the handlebar height two to three inches below the saddle height, tourers will often like to have the bar at the same height as the saddle. Mountain bikers usually position the bar a couple of inches below the saddle. The important thing is to take enough time to find the best position for you. If that means setting up a touring bike with the handlebar four inches below the saddle height, so be it. I recommend the longest reach and lowest position you feel comfortable in, (with emphasis on comfortable).

Handlebar width (road & ATB) and drop for road style bars

A few brands of drop style bars come with a choice of how much lower the drop section of the bar is from the top. Unless you are a track sprinter or a criterium racer, you don't need the very deep drop bars. Most bars come in a selection of widths. Most people seem happiest with their hands positioned on the bar at about the same distance apart as the width of their shoulders, so that your arms are roughly parallel when reaching to the bar. When determining stem dimensions, try the different bar widths available, starting with one that's the same as your shoulder's width. Then see which works best for you.

Fine tune saddle height

As you get familiar with the way your bike feels with these changes, go back to the beginning and check your saddle height again. You should be able to pedal through the bottom of the stroke without completely straightening your knees, and without rocking your hips on the saddle. If either is the case, your saddle is too high. Straightening your knee during the pedal's rotation limits how fast you can smoothly rotate the pedals, and causes you to want to use a higher gear than that which would be most efficient. By limiting the extension of your legs you smooth out your pedaling and make higher RPMs possible. That's better for your muscles and joints. If the saddle is too low you'll quickly feel a burning sensation in your quadriceps or thigh muscles.

Stock frame sizing

So what does all this mean when it comes to picking a frame size down at your local bike shop? Stems and seat posts come in lots of different configurations. That means you can choose from several different frame sizes and still get the same good fit.

All other things being equal, a longer top tube will give you a bike with a longer wheelbase, less twitchy handing, better shock absorption, and require a shorter reach stem. Since the down tube, (which connects the bottom bracket with the head tube) will be longer, it can twist a bit more making the frame somewhat less stiff while accelerating, so there is a performance penalty.

A longer seat tube will allow for a higher handlebar position with the same stem and give more room for pumps and water bottles. It can also prevent you from getting as low a handlebar position as you may want. Most importantly though, the longer seat tube raises the top tube and decreases stand-over clearance, something you should give careful consideration to.

Methodology

Notice that in most of this there is no mention of measuring body parts. And nowhere do I have you dropping plumb lines from knees, positioning handlebars so they block views of front hubs, comparing the length of your forearm to the distance between the front of your saddle to your handlebar, etc. My methodology is quite different from what most people are doing in bike shops. The Fit Kit and other marketed fitting systems are based on the measurements of lots of different riders and their bikes. It assumes that the averages of those measurements are somehow going to result in a good fit for you.

But take the case of two riders; Rider A, and Rider B. Rider A has very little upper body muscle but very strong legs. Rider B is identical to Rider A but has been working out at Ralph's Gym and looks like a body builder. The fore aft position of the saddle will be slightly different for the two riders. The extra upper body mass of Rider B will require a slightly further back saddle position to give the same balance. But that doesn't necessarily mean that Rider B should have his saddle further back. He may prefer the more forward position. Only he knows what his preference is.

Take me for example. I started riding long distances in the mid 1970s. After much trial and error, I arrived at a bike fit that worked for me. I could ride a century without much fatigue. I still have a bike that's set up exactly like the racing style bike I rode back then. I haven't gotten any taller, or shorter. My arms haven't grown or shrunk. But my neck and back are a lot stiffer in 2001 than they were in 1975. The low handlebar position is still great while I'm climbing a hill, but on the flat after 60 miles my neck isn't as comfortable as it once was. A higher handlebar is called for now that I'm older.

Measuring my body wouldn't tell me that the handlebar needs to be higher. But I used to be comfortable in the drops, (the lower part of a road handlebar). Now, I can't see the road ahead of me if I'm in the drops.

Somewhere between the fit of the track racer's bike and the long distance tourer's bike is where most of us want to be. But each of us has to find that point for ourselves. Remember, there is only one expert when it comes to fitting your bike. Only you know how you feel on your bike. Only you know what compromises you are willing to make while riding. You're the expert!

By the way, for reasons that escape me, I frequently get email from folks who tell me that they read my fitting article, loved it, and have a question. They then tell me how long their arms, legs and torso are, proceed to inform me that some bike shop wants to sell them a particular bike, and want to know if I think the bike would fit them well. My reaction is to wonder whether I wrote the article clearly, or if they read it but didn't understand it, or if they just hadn't read it. I sometimes go back and reread my own article, assuring myself that yes indeed I did make my ideas clear, and for whatever reason the person just didn't get it. Oh well...

So I'll take this opportunity to rephrase myself. I don't know if a particular bike will be a good fit for you. Even if I knew every dimension of the bike, and every dimension of you, I couldn't tell you if it's a good fit or not. So please don't write asking me to tell you something that I can't possibly know. Reread the article.

If you need an authority figure to tell you how your bike should fit, then by all means go to some shop that offers the Fit Kit or some such thing, pay them whatever they charge,

and do as they say. Some folks need to be told what to do. But I don't want to tell you what to do. I'd rather give you the knowledge you need to fit yourself. Because with that knowledge, I believe you can do a much better job of it than some expert charging you money.

And, by the way, I'm a bike mechanic, not a doctor. So if your knee or back or neck or wrist hurts, and you've set your bike up using the information in this article, well, I suppose you could sue me, but please don't expect me to diagnose your ailment. See a doctor. Then sue me. ;-)

By the Way

This article is for your information only. It's not intended as the jumping off point for a conversation with me about bicycle fit. I'd like to discuss it with everyone who reads it, but unfortunately if I did that I'd have no time to build wheels, which is how I make my living. I don't do bicycle fittings any longer. Nor do I have the time to respond to or even read all of the mail I get regarding this article. So, when you write to me and I don't reply, don't feel as though I've singled you out. I no longer reply to any email on this topic. I just have no time. Sorry.

http://www.PeterWhiteCycles.com

Return to: Peter White Cycles home page

G. Tires and Tubes

1. Tires

Bicycle tires are available in many designs and specifications, ranging from general-purpose designs to tires designed to perform best under very specific weather or terrain conditions. If, once you've gained experience with your new bicycle, you feel that a different tire might better suit your riding needs, a qualified bicycle shop can help you select the most appropriate design.

The size, pressure rating, and recommended rotating direction are marked on the sidewall of the tire (see fig. 17).

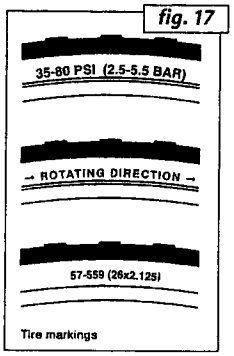


fig. 17

⚠WARNING: Never inflate a tire beyond the maximum pressure marked on the tire's sidewall. Exceeding the recommended maximum pressure may blow the tire off the rim, which could cause damage to the bicycle and injury to the rider and bystanders.

The best and safest way to inflate a bicycle tire to the correct pressure is with a bicycle pump which has a built-in pressure gauge.

⚠WARNING: There is a safety risk in using gas station air hoses or other air compressors. They are not made for bicycle tires. They move a large volume of air very rapidly, and will raise the pressure in your tire very rapidly, which could cause the tube to explode.

Tire pressure is given either as maximum pressure or as a pressure range. How a tire performs under different terrain or weather conditions depends largely on tire pressure. Inflating the tire to near its maximum recommended pressure gives the lowest rolling resistance; but also produces the harshest ride. High pressures work best on smooth, dry pavement.

Very low pressures, at the bottom of the recommended pressure range, give the best performance on smooth, slick terrain such as hard-packed clay, and on deep, loose surfaces such as deep, dry sand. Tire pressure that is too low for your weight and the riding conditions can cause a puncture of the tube by allowing the tire to deform sufficiently to pinch the inner tube between the rim and the riding surface.

⚠CAUTION: Pencil type automotive tire gauges can be inaccurate and should not be relied upon for consistent, accurate pressure readings. Instead, use a high quality dial gauge.

Ask a qualified bicycle shop to recommend the best tire pressure for the kind of riding you will most often do, and have a qualified bicycle shop inflate your tires to that pressure. Then, check inflation as described in

⚠WARNING: If your bicycle does not fit properly, you may lose control and fall. If your new bicycle doesn't fit, ask your dealer to exchange it before you ride it.

A. Standover height

Standover height is the basic element of bicycle fit (see fig. 2). It is the distance from the ground to the top of the bicycle's frame at that point where your crotch is when straddling the bicycle. To check for correct standover height, straddle the bicycle while wearing the kind of shoes in which you'll be riding, and bounce vigorously on your heels. If your crotch touches the frame, the bicycle is too big for you. Don't even ride the bicycle around the block. A bicycle which you ride only on paved surfaces and never take off-road should give you a minimum standover height clearance of two inches (5 cm). A bicycle that you'll ride on unpaved surfaces should give you a minimum of three inches (7.5 cm) of standover height clearance. And a bicycle that you'll use off road should give you four inches (10 cm) or more of clearance.

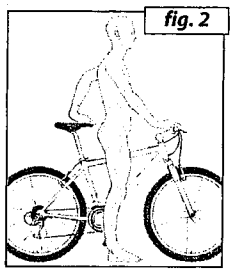


fig. 2

⚠WARNING: If you plan to use your bicycle for jumping or stunt riding, read Section 2.F again.

B. Saddle position

Correct saddle adjustment is an important factor in getting the most performance and comfort from your bicycle. If the saddle position is not comfortable for you, seea qualified bicycle shop. The saddle can be adjusted in three directions:

1. Up and down adjustment. To check for correct saddle height (fig. 3):
   - sit on the saddle;
   - place one heel on a pedal;
   - rotate the crank until the pedal with your heel on it is in the down position and the crank arm is parallel to the seat tube.

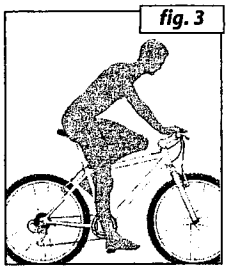


fig. 3

If your leg is not completely straight, your saddle height needs to be adjusted. If your hips must rock for the heel to reach the pedal, the saddle is too high. If your leg is bent at the knee with your heel on the pedal, the saddle is too low.

Once the saddle is at the correct height, make sure that the seatpost does not project from the frame beyond its "Minimum Insertion" or "Maximum Extension" mark (fig. 4).

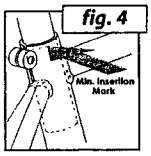


fig. 4

If your bicycle has an interrupted seat tube, as is the case on some bicycles with rear suspension, you must also make sure that the seat post is far enough into the frame so that you can touch it through the bottom of the interrupted seat tube with the tip of your finger without inserting your finger beyond its first knuckle (see fig. 5).

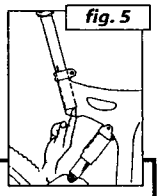


fig. 5

⚠WARNING: If your seat post projects from the frame beyond the Minimum Insertion or Maximum Extension mark (see fig. 4) or you cannot touch the bottom of the seat post through the bottom of the interrupted seat tube with the tip of your finger without inserting your finger beyond its first knuckle (see fig. 5), the seat post may break, which could cause you to lose control and fall.

2. Front and back adjustment. The saddle can be adjusted forward or back to help you get the optimal position on the bicycle. Aska qualified bicycle shop to set the saddle for your optimal riding position and to show you how to make this adjustment.

Planning your very first bicycle touring adventure!

At this point you've read through a number of pages that explained what touring is and some information related to getting started touring. As you've turned each page your excitement has grown as you've realized that bicycle touring really is something that sounds like it's made to order for you.

After all what's not to like about seeing beautiful scenery, visiting new places and meeting interesting people?

Only one little problem remains, planning that first tour!

I used this road as my exit route out of my home city during my first tour as well as several others. It remains a favourite!
Click to enlarge.

Taking a fully supported/SAG tour first

When planning your first tour one easy option is to find a local company that offers fully supported tours. This option would supply you with full support during your first tour while providing you with an opportunity to see how well bicycle touring works for you. These tours will often include other riders as well so you will definately get a chance to meet others. Other advantages include not having to carry your gear, some meals are prepared for you and accomodations are setup in advance. Depending on the length of trip it might be cost effective to try touring this way first rather then splurge on bicycle equipment to allow you to carry your gear.

Planning your own self-supported tour

On tour I will often receive questions from others about how to plan their first tour. My answer is usually to pick a motel, hotel or bed and breakfast within a comfortable bicycle ride from home. The distance should be slightly further then you've gone before if you are new to long distance cycling. Most new touring cyclists seem to find 20 t0 25 km a longish distance so I usually suggest finding a place about 30 km from home.

Ride from home to the accomodation carrying mimimal gear. Park the bike when you arrive and go out for a nice dinner, play, movie or visit something like a museum. Enjoy a comfortable sleep. The next day ride back home.

Just like that you've experienced your first tour. You were close enough to home to feel like you have bail-out options while being far enough away to experience an adventure. Costs are minimal since limited gear was carried (really just a change of clothing) and you managed to pack the bicycle touring experience into a small package during your tour. How? Well you experienced the bicycling, the good food, the comfortable sleep and the cultural experience all in one trip. It's very likely that you spoke with at least one other person about cycling during your tour too.

My first formal tour was a self-supported, fully loaded solo tour. I planned the ride so that at no point was I more then about 90 minutes from home by car. This gave me plenty of back-out options if the tour didn't work out for me. Since then I have helped others go on their first tours.

Here is a list of ideas that seem to work out well when planning your first tour.

- Furthest point within 90 minute car ride from home

By staying within a 90 minute car ride from home on your first tour you won't feel as bad about inconveniencing others should you need a lift home. You also won't feel as uncomfortable when you reach the farthest point and realize that you've only made it half-way.

- Leave with a tail or cross wind

During my first tour I lucked out and experienced a tail wind during my first day. I also set a new distance record for me at the time of 93 km in just over 3 hours. Having a tail wind on day one makes the ride easier and it will help with the other days when you get to face a head wind. Be careful through not to let the tail wind carry you far beyond the distance you want to travel back in the next day or two.

During my Riding the Tailwind Triangle tour my friend and I experienced two days of amazing tailwinds before turning into a headwind on the last day headed for home. This was his first successfully completed tour and he had a blast (literally and figuratively). He regularily talks about his plans for his next tour now.

- Try to leave and return on a sunny weather day

I have started tours in rain. In fact during my Round Lake Erie tour I outran the same rain storm four times during my first day as I zig zagged down country roads.

For a first tour aim for good weather. Riding a country road in shorts and a t-shirt with sunshine beaming down (on to your sunscreen of course) is a very enjoyable experience. The same goes for the last day if possible. The last day of any tour is very memorable but even more so when you return home with the sun shining and a smile on your face.

- Consider doing a circle tour where you leave from home and return to your home by bicycle

Few things are nicer then knowing that you left from home by your bicycle, travelled some distance and then returned again all while riding your bicycle. Setting up your first tour this way also eliminates the need to worry about parking a car etc. (To be honest it also makes for an even more impressive story to tell your friends and family. You went how far on your bike?).

- Have flexible and reasonable goals

During my first tour I aimed for Port Burwell Provincial park in Ontario as the ending point of my first day. In reality I also had another campsite picked out that was about half-way to Port Burwell. When I reached the first campground I had the option of stopping or continuing. I continued but I easily could have stopped instead.

- Be comfortable with your bike

Whenever you leave town on a bicycle a natural concern is whether or not the bike will get you home safely. Why not take the bike in for a quick tune-up a couple of weeks before your tour? Make sure you tell the bike shop about your touring intentions. The cost of a tune-up will usually be minimal and the peace of mind from having someone look over your bike will certainly make you feel better.

- Bring your friends or family along

This one could be a double-edged sword. I like the flexibility of riding a solo tour and I actually rode my first tour completely solo (although I did meet another touring cyclist on that tour too).

Other people really want someone else along so that if problems occur there is someone else there to assist. A second reason that's often mentioned is the desire to have companionship.

Bringing your family along could involve them riding their bikes too, just like the Feldmann and Gagnon family's or it could involve you riding your bike and meeting your vehicle driven family at the campground at the end of the day.

- Make sure that you have fun!

I've purposely left this one to the end even through it's the most important point in my opinion! For me a bicycle tour should be about having fun and enjoying yourself. I find on tour that if I'm not having a good time then something needs to change so that I am once again having fun. Sometimes this means stopping for lunch, visiting a museum or just plain stopping for the day early.

For me a bicycle tour is about the experience. It's much more important that the experience be an enjoyable one filled with fun times then it is that I cover 4 zillion miles although if I need to cover 4 zillion miles to return home then I certainly have to do that too. (grin)

Hopefully you've noticed that on this page about planning your first tour I haven't said that you need the best bike, latest gear or any thing special. All of that will come with time provided that you have an enjoyable experience and you feel that your current gear needs an upgrade.

Bicycle touring is an enjoyable activity that is well within everyone's reach provided that you have a bicycle and an interest in trying something different.

Did I miss something?
Feel free to drop me an email if you feel that this page is lacking that special something.....

Bike Trails

Promote Your Sport by Following these Guidelines

Biking through natural areas is exciting but the impact on the ecological and historical sites can be severe. Artifacts from Indian and Civil War camps, mills and old transportation sites are frequently damaged when disturbed by human activities. Most of these locations are not identified. Damage from erosion, disturbance to wildlife and destruction of rare and native vegetation can have long-term environmental effects. The Park Authority's stewardship responsibility is to protect and manage these cultural and natural resources. We need your help and participation.

- **Don't blaze new trails**
  Cutting a fresh path can damage sensitive environmental areas or unmarked historical sites. Steep inclines are particularly susceptible to erosion.
- **Bike only when trails are dry**
  Biking on wet trails causes rutting and erosion.
- **Obey all signs**
  "No biking" signs are posted in areas especially vulnerable to resource damage.
- **Let the natural terrain stay natural**
  Do not construct jumps or otherwise mark the trails.

Share Trails Safely with Others

Many county residents and visitors use the parks. Please be considerate.

- **Bike at a reasonable speed**
  Maintain control of your bike at all times
- **Yield the right-of-way**
- **Announce your intention to pass**
  Pass on your left when approaching other trail users moving at a slower speed.

Camp Forms
Rec-PAC Programs
Gardening
Golf Tournaments
Junior Golf Program
Miniature Golf
Scouting Programs
Trails Information
Trips and Tours
Volunteer Programs
2004 Elly Doyle Awards

ADMINISTRATION

Park Authority Board
Park Development
Needs Assessment
Annual Report FY 2003
2002-2006 Strategic Plan
Resource Management
Natural Resources
Cultural Resources
Open Space Preservation
Park Foundation
Park F.A.Q.
Park Use Permits
Park Rules
Park Policy Manual
Seasonal Employment
Internships

Disability Info

FCPA Homepage

- **When approaching horses**
  Dismount and walk your bike. Horses can bolt when frightened.

Protect Yourself

- **Wear a helmet**
- **Know your limits**
  Don't ride beyond your abilities

Major Bicycle Trails

BURKE LAKE PARK BICYCLE TRAIL
Lakeside trail, 4.68 miles, gravel. Park entrance fee of $5 charged non-Fairfax County residents on weekends and holidays, March-November. Call 703-323-6601 for more information.

ACCOTINK CREEK TRAIL
Stream valley trail, 2.5 miles of gravel and asphalt from Arlington Blvd/Rt.50 (0.8 miles east of Fairfax Circle) to King Arthur Road. Plans call for this trail to be extended to complete a continuous trail link to the Wakefield Accotink Trail system south of Little River Turnpike.

WAKEFIELD PARK/LAKE ACCOTINK PARK TRAIL
Gravel trail, 5 miles, extending from the north side of Wakefield Park atLittle River Turnpike/Rt. 236 to Highland Street just south of the park. Call Lake Accotink Park (703-569-3464) or Wakefield Park (703-321-7081) for information.

HOLMES RUN TRAIL
Stream valley trail, 1.3 miles, gravel and asphalt. From Annandale Road (at the end of Hockett Street) to Sprucedale Drive (near Sleepy Hollow Road).

LONG BRANCH TRAIL
Stream valley trail, 1.0 miles, gravel. From Braddock Road at Wakefield Chapel Road to Queen Elizabeth Blvd. (across from Candace Lane).

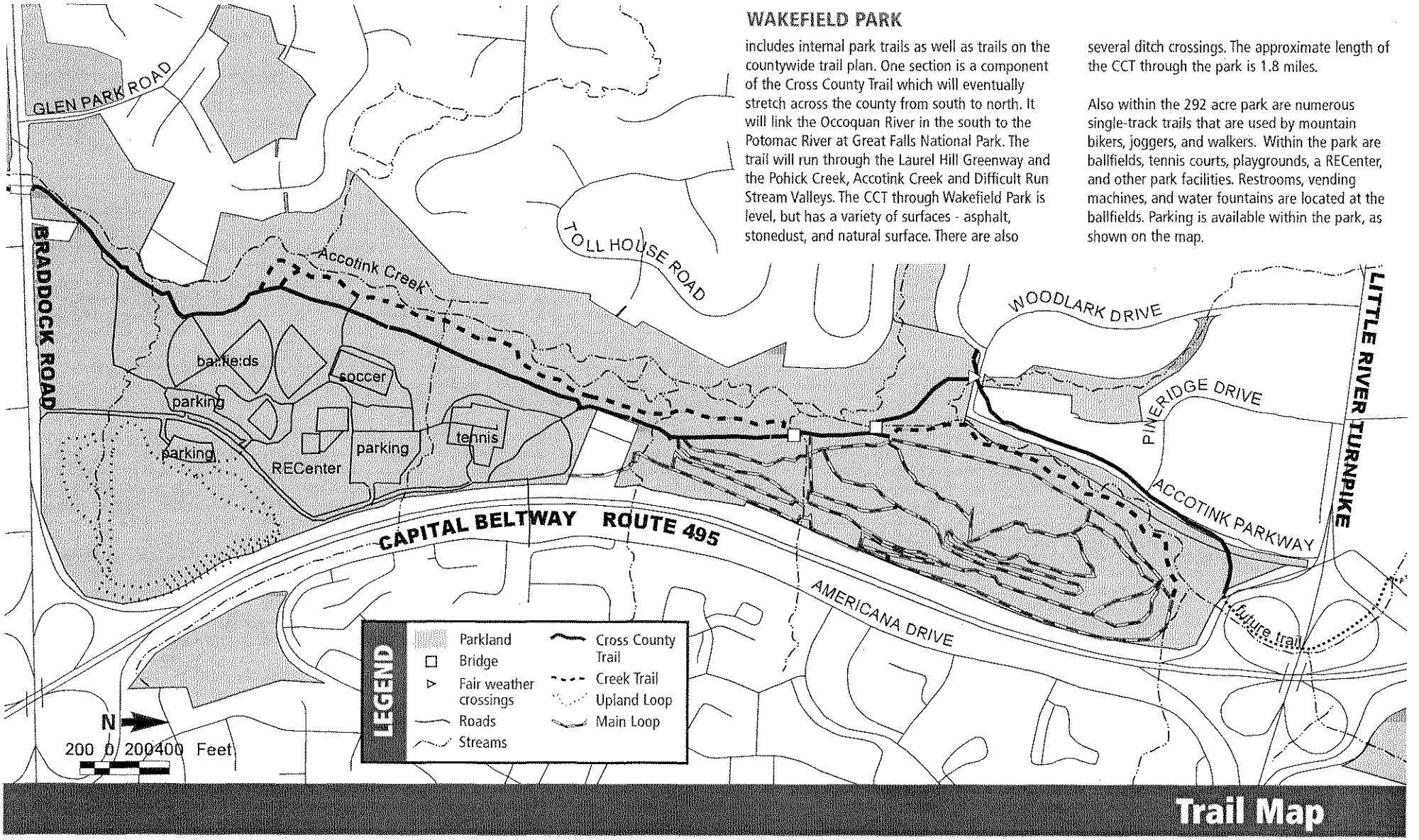
SUGARLAND RUN TRAIL
Stream valley trail, 2.2 miles, asphalt bikeway. From Sugarland Road southward to Herndon Town line and Runneymead Park.

SOUTH RUN TRAIL
Stream valley trail, 1.6 miles, asphalt bikeway. From Burke Lake Dam southward, crossing Lee Chapel Road, leading to

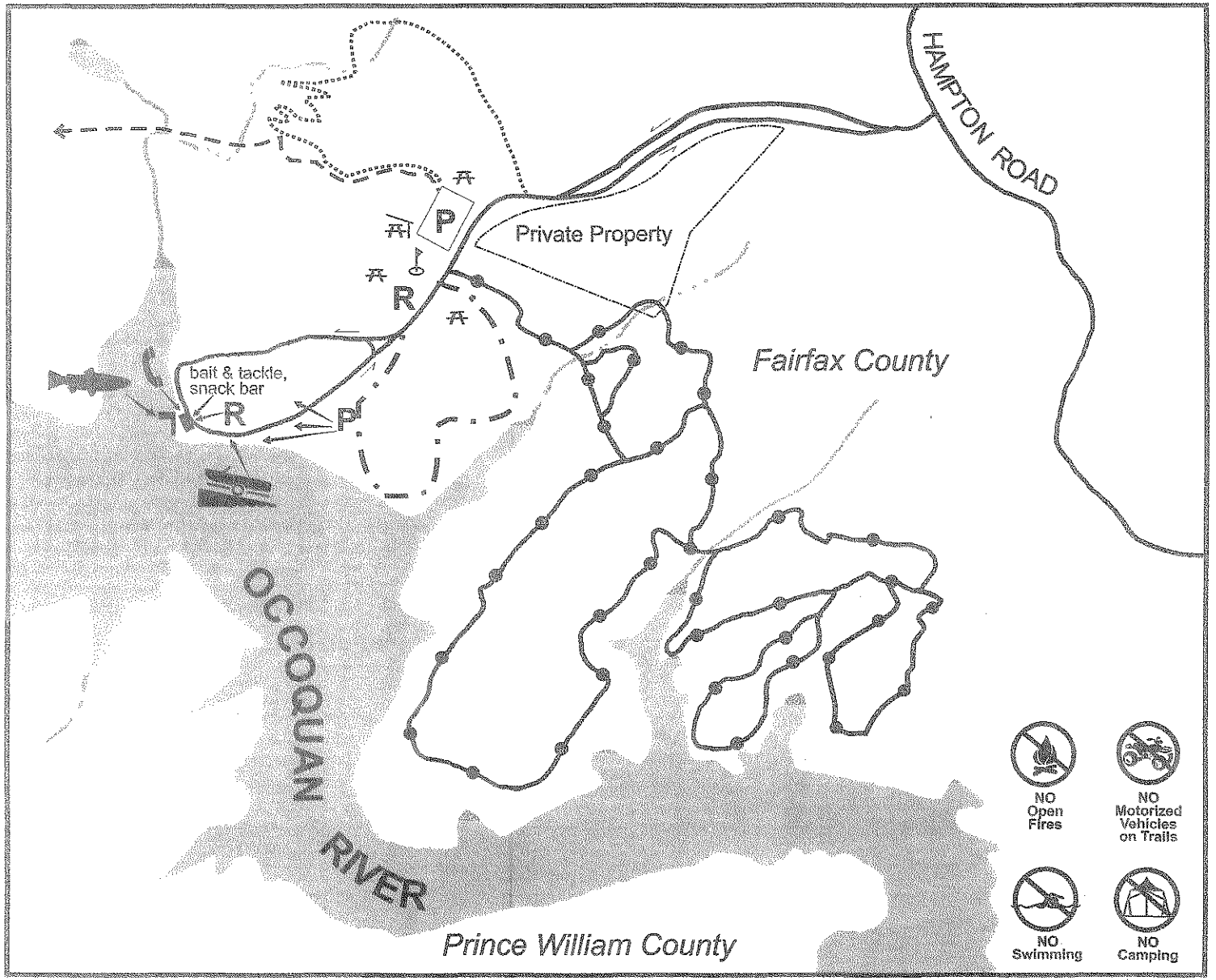
WAKEFIELD PARK

includes internal park trails as well as trails on the countywide trail plan. One section is a component of the Cross County Trail which will eventually stretch across the county from south to north. It will link the Occoquan River in the south to the Potomac River at Great Falls National Park. The trail will run through the Laurel Hill Greenway and the Pohick Creek, Accotink Creek and Difficult Run Stream Valleys. The CCT through Wakefield Park is level, but has a variety of surfaces - asphalt, stonedust, and natural surface. There are also several ditch crossings. The approximate length of the CCT through the park is 1.8 miles.

Also within the 292 acre park are numerous single-track trails that are used by mountain bikers, joggers, and walkers. Within the park are ballfields, tennis courts, playgrounds, a RECenter, and other park facilities. Restrooms, vending machines, and water fountains are located at the ballfields. Parking is available within the park, as shown on the map.



Trail Map



Fountainhead Regional Park

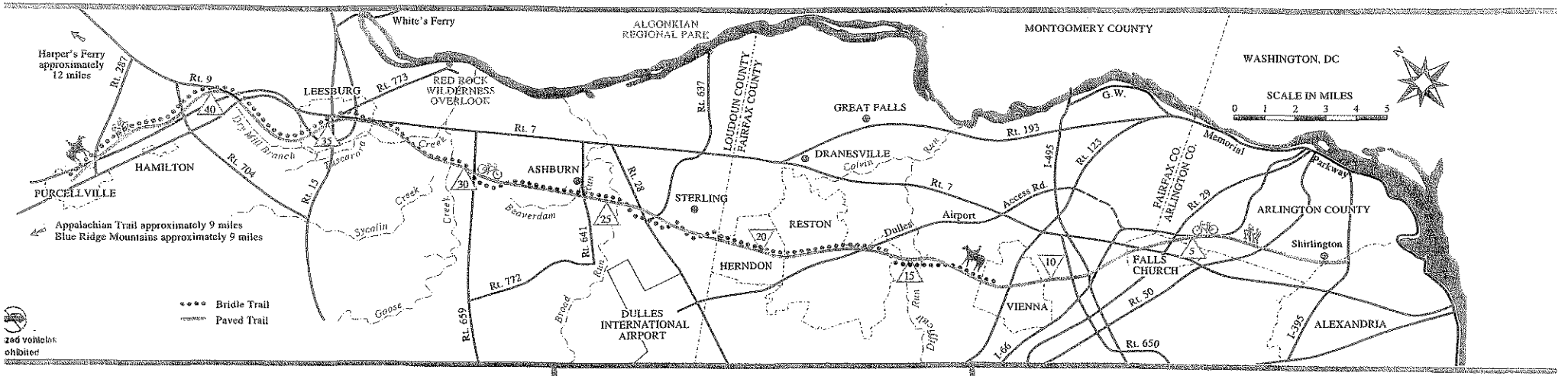
10875 Hampton Road
Fairfax Station, Virginia

PARK CLOSED IN WINTER.
Open mid-March to November, daily, dawn to dusk.
Trails accessible year `round conditions permitting. Call 703-250-2473 for trail conditions.

- Boat Ramp
- Rental Shelter
- Mini Golf Course
- Picnic Tables
- R - Rest Rooms
- Public Phone
- P - Parking
- Fishing Pier & Boardwalk

- **Mountain Bike Trail** (5.5 mi., no horses)
- Yellow Trail (1.5 mi., pedestrians only)
- **White Trail** (2.0 mi., pedestrians only)
- **Blue Trail "Bull Run-Occoquan Trail"** (17.5 mi., no bikes)

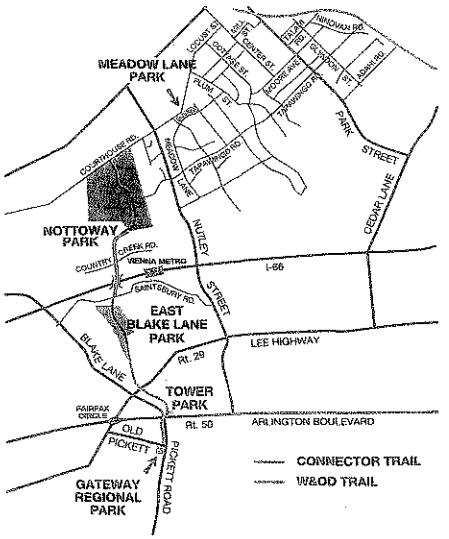
Washington & Old Dominion Railroad Regional Park



W&OD Trail Guides Available

The 56-page, 4-color *W&OD Trail Guide* includes 25 detailed map pages with symbols to indicate connecting trail systems, bike repair shops, restrooms, fast food restaurants and other trailside facilities. The guides are available for sale at Northern Virginia Regional Parks, bike shops and by mail. For more information, call (703) 729-0596.

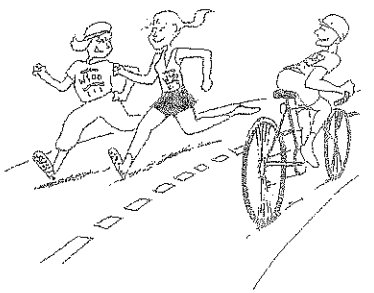
The City of Fairfax Connector Trail



The City of Fairfax Connector Trail is a combination of off-road paved trail, on-road bike routes and side streets that connect the W&OD to the City of Fairfax. Be sure to select a route that matches your skill level.

Adopt-A-Trail

Individuals and groups may adopt a section of trail to enhance the trail's beauty and safety by picking up litter, sweeping glass, trimming stray branches and reporting maintenance problems.
For more information about this program, call the Trail Office at (703) 729-0596.

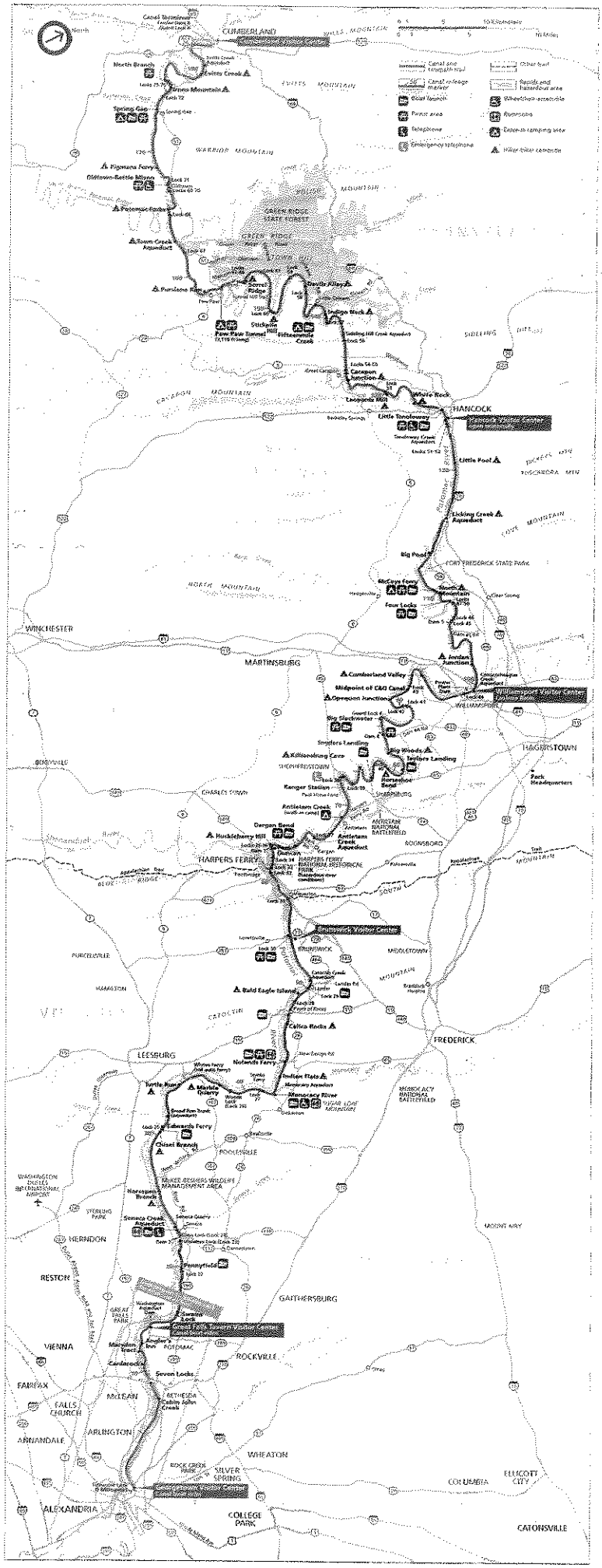


Friends of the W&OD Trail

In March 1991, a group of concerned citizens, government officials, business representatives and politicians formed Friends of the W&OD Trail, a non-profit, charitable corporation whose purpose is to fund projects that will protect and improve the W&OD Trail. Join many of your neighbors and friends who realize that the W&OD Trail is a priceless resource in our community well worth directly supporting and protecting. For more information, call (703) 534-2511.

Questions, Problems, or Suggestions

W&OD Trail Office: (703) 729-0596
W&OD Railroad Regional Park
Mailing Address: 21293 Smiths Switch Rd.
Ashburn, Virginia 22011
NVRPA Headquarters: (703) 352-5900



C&O Trail

http://www.nps.gov/choh/planyourvisit/parkmaps.htm

ANNUAL C&O CANAL BIKE TRIP 2007

WELCOME TO THE ANNUAL C&O CANAL BIKE TRIP!

Once again, the Young Men of the Southern Maryland Wards are venturing forth on the C&O Canal.

The dates for this year's ride are **Wednesday, July 11th through Saturday, July 14th**. We are looking forward to this trip and the fellowship enjoyed by all who attend.

All participants are expected to read and follow the standards of "**FOR THE STRENGTH OF YOUTH**". Alcohol, tobacco and other harmful substances are not allowed. Proper behavior and respect for others and the environment are expected at all times.

As in the past, a team of experienced trail bosses will prepare all the food. You will not starve on this trip, in fact just the opposite – you will feast! All you really need to bring in this area are water bottle(s) for the trail and an appetite for the stops. All participants will be expected to assist cleaning up after meals and packing up gear before starting the ride each morning, and to participate in nightly devotional activities.

Details

Who?	Youth (14 years old and older), adults; Youth younger than age 14 must be accompanied by a parent or guardian in order to participate.
When?	Wednesday, July 11th through Saturday, July 14th 2007
Where?	180 miles of the C&O Canal, starting at mile 190 in Cumberland, MD (Alleghany County) and ending at mile 10 in Carderock, MD (Montgomery County)
Cost?	**$70.00 per rider** (covers meals, camp fees, fun, swimming, entertainment, transportation of personal gear while on the trail and a *limited edition* t-shirt (to be delivered at some point after the ride.) commemorating the trip. **Deadline for registration is June 24, 2007. After June 24th cost is $85.00 per rider.**
What equipment you will need to bring:	• 26" off-road bicycle • cycling clothes (padded shorts, gloves, sunglasses, *helmet) • water bottle(s) • tent (unless you're sharing someone else's tent) • sleeping bag • compass • swim gear • toiletries • comfortable clothes for camp • flashlight • camera (optional) • extra snacks (optional – but not really necessary since meals are plentiful and hi-carb snacks are provided for the riders while on the trail.) (*required to be worn at all times while riding)
What NOT to bring:	• Radio, cassette/CD player, etc. • portable video games • fireworks ((Anything of this nature that is found by leaders while on the trip will be confiscated by the trail bosses. So, LEAVE THIS STUFF HOME.))

ANNUAL C&O CANAL BIKE TRIP 2007

Schedule

Wednesday, July 11th	
10:00 a.m.	Meet at the Lexington Park meetinghouse; load bikes, food, and personal gear into trailers
10:30 a.m.	Depart (BE ON TIME or you'll be left behind!!!)
4:00 p.m.	Arrive in Cumberland, MD., Dinner at restaurant of your choice (several fast foods available).
5:00 p.m.	Depart Cumberland (mile **184**) and ride to Spring Gap campground (mile **173**).
7:30 p.m.	Set up camp
8:15 p.m.	Devotional
9:30 p.m.	LIGHTS OUT

Thursday, July 12th	
5:45 a.m.	Rise and shine. Pack up personal gear and load into trailers.
6:15 a.m.	Breakfast
7:00 a.m.	Hit the trail
12:00 p.m.	Lunch at Little Orleans (mile **140**)
4:30 p.m.	Arrive at Ft. Frederick State Park group camping area (mile **111**); set up camp; relaxation time (swimming, etc.)
6:30 p.m.	Dinner
8:15 p.m.	Devotional
9:30 p.m.	LIGHTS OUT

Friday, July 13th	
5:45 a.m.	Rise and shine. Pack up personal gear and load it into trailers.
6:15 a.m.	Breakfast
7:00 a.m.	Hit the trail
11:00 p.m.	Lunch at Dam 4 (mile **85**).
1:00 p.m.	Arrive at Antietam Creek campground (mile **69**) - group camping area and set up camp; relaxation time (swimming, etc.).
6:30 p.m.	Dinner
8:15 p.m.	Devotional
9:30 p.m.	LIGHTS OUT

Saturday, July 14th	
5:45 a.m.	Rise and shine. Pack up personal gear and load it into trailers.
6:15 a.m.	Breakfast
7:00 a.m.	Hit the trail
12:00 p.m.	Lunch at White's Ferry (mile **35**)
4:30 p.m.	Arrive at Carderock (mile **10**); unpack personal gear from trailer; load bikes into trailer; hook up with transportation home.
5:15 p.m.	Depart Carderock
7:00 p.m.	Arrive at Lexington Park meetinghouse; unload bikes and equipment; return equipment to storage area inside

Please fill out the registration form on the next page and get it with your fee to Robert Erickson no later than June 24th.

C&O Canal Bike Ride Participant Registration Form

EACH RIDER **MUST** HAVE A REGISTRATION FORM. ALL INFORMATION IS **REQUIRED**.

ANNUAL C&O CANAL BIKE TRIP 2007

Participant Information								
Name:				Age (if under 18):				
Address:								
City:				ST:	MD	ZIP:		
Telephone:		Email:				T-Shirt Size:		

T-shirt sizes are: (S) Small, (M) Medium, (L) Large, (XL) X-Large, (XXL) XX-Large, and (XXXL) XXX-Large

T-SHIRTS ARE NORMALLY READY A FEW MONTHS AFTER THE BIKE TRIP. A MAILING ADDRESS IS MANDATORY; IF DIFFERENT FROM ABOVE ADDRESS PLEASE PRINT ADDRESS ON THE BACK OF THIS FORM SO WE CAN MAIL YOUR SHIRT TO YOU.

Emergency Contact Information						
			Same as above ☐			
Name:		Relationship:				
Address:		Telephone:				
City:		ST:	MD	ZIP:		

I/WE, BEING THE PARENT(S)/LEGAL GUARDIAN(S) OF ABOVE PARTICIPANT, DO HEREBY APPOINT THE ADULT CHAPERONE (S) TO ACT ON MY/OUR BEHALF TO AUTHORIZE NECESSARY EMERGENCY TREATMENT.

Signature: _____ Date: _____
(parent or guardian)

Health Insurance Information			
Carrier:			
Name of Insured (if other than Bike Ride Participant:			
Group Nr:		ID Nr:	
Medical Concerns:			
Special Needs:			

***Helmets are required to be worn at all times while riding.** I HAVE **READ** AND AGREE TO ABIDE BY THE STANDARDS SET FORTH IN "**FOR THE STRENGTH OF YOUTH**". IF IT IS DETERMINED BY THE ADULT LEADERS THAT I HAVE VIOLATED THESE STANDARDS WHILE ON THE TRIP, I AGREE TO HAVE MY PARENT/GUARDIAN (OR THEIR DESIGNEE) PICK ME UP AT THAT NIGHT'S CAMP AND THAT I WILL NOT BE ALLOWED TO COMPLETE THE TRIP. I ALSO UNDERSTAND THAT THIS WILL ALSO RESULT IN A FORFEITURE OF MY TRIP FEE.

Signature: (Rider)	
Signature: (parent or guardian) Required for riders under 18 yrs of age	

Part travelogue, part documentary, "On The Canal" explores the wonderful C&O Canal towpath.

This charming 30-minute journey covers all 184.5 miles and is filled with practical advice and historical information.

Along the way meet the friendly faces and the sometimes quirky places. Relax and enjoy the sights, sounds and natural beauty that belong to us all.

- 2006 Hometown Video Awards
  winner Documentary Profile
- 2006 CAM Awards
  winner Outside Programming-Entertainment
- 2006 Videographer Awards
  Award of Distinction

SPECIAL FEATURES

OUTTAKES & DELETED SCENES

Color. Approx. 4 minutes

"DOWN THE OLD POTOMAC"

Step back in time to 1917 and experience the Canal when hardy mules and noble Canal barges still moved their cargo to Washington. From the classic THOMAS A. EDISON COLLECTION. Courtesy: Library of Congress B&W. Approx. 12 minutes

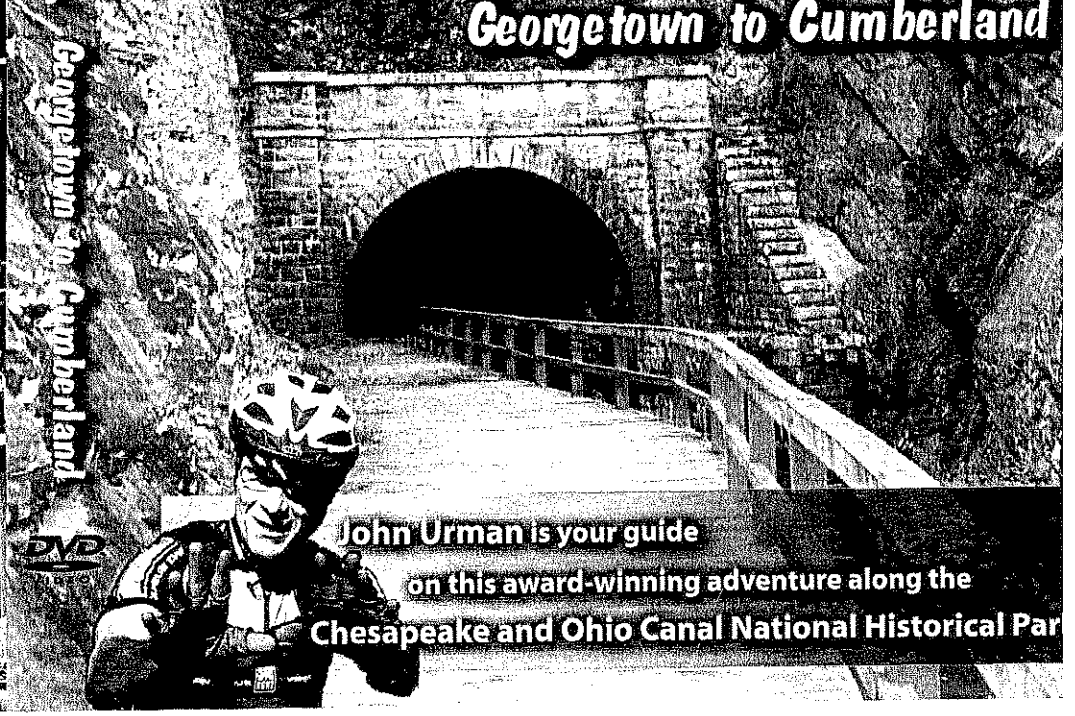
contact: youcubed@comcast.net

DVD

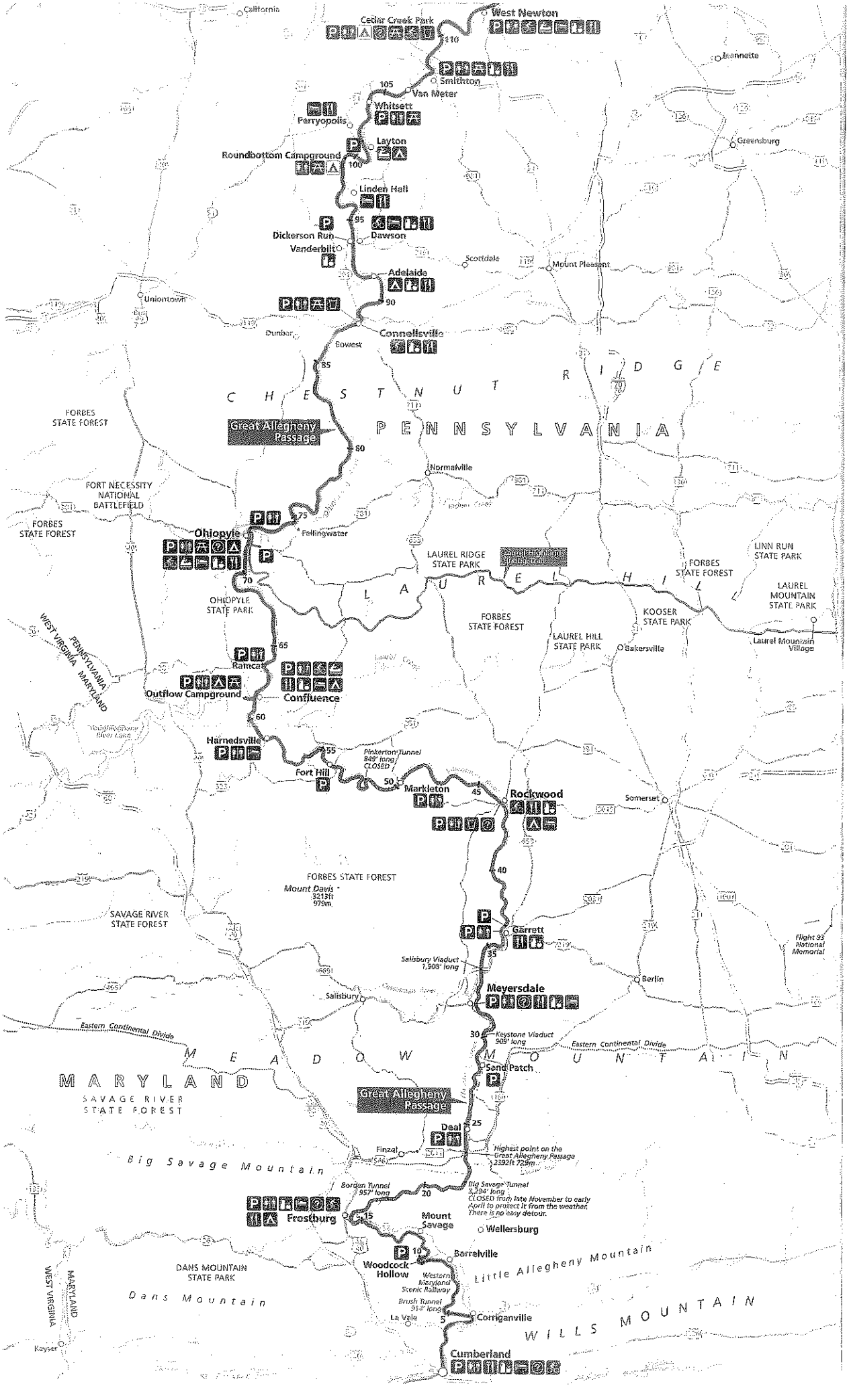
ON THE CANAL Georgetown to Cumberland

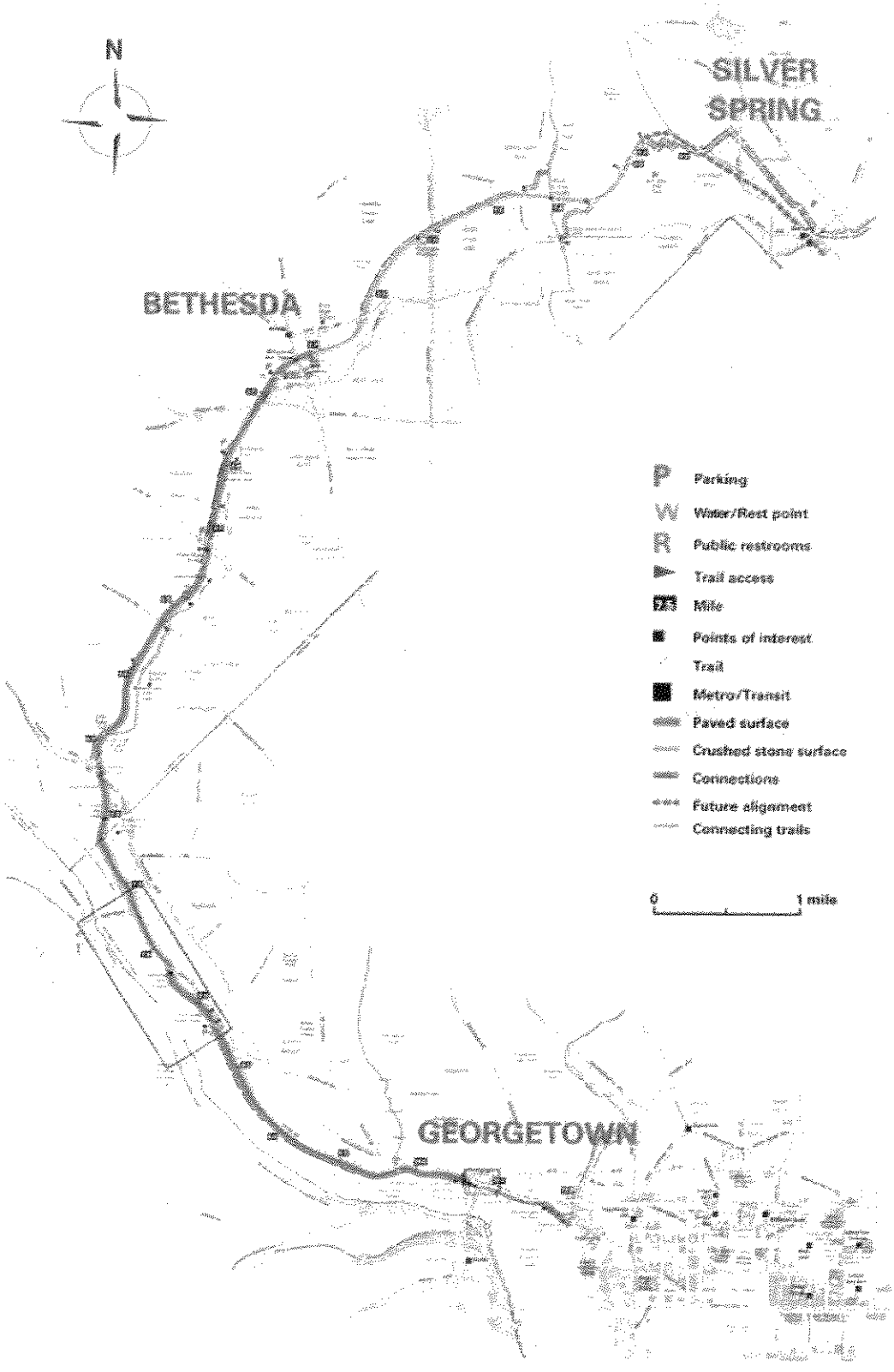
ON THE CANAL

Georgetown to Cumberland

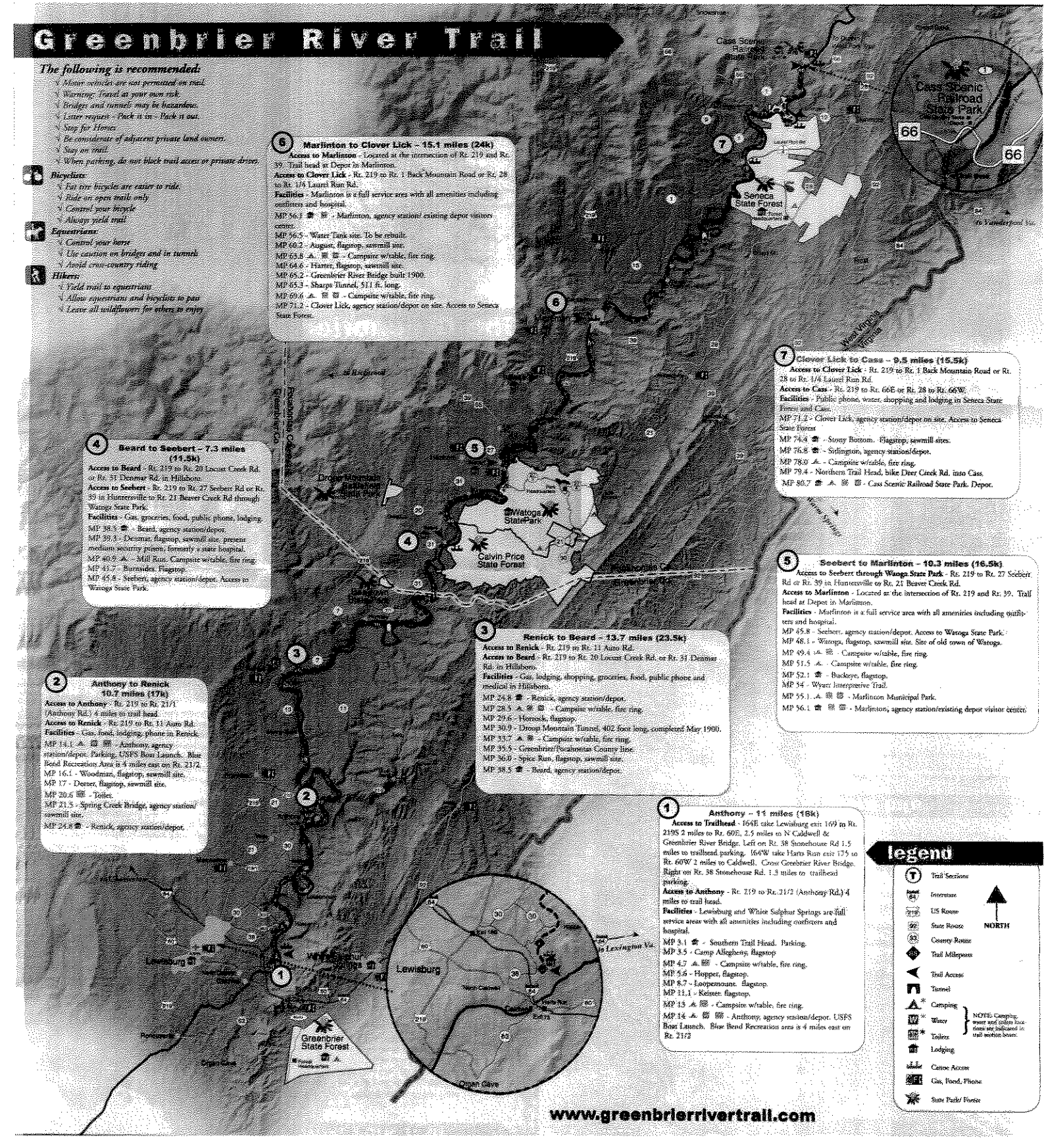


John Urman is your guide on this award-winning adventure along the Chesapeake and Ohio Canal National Historical Par


Great Allegheny Passage
Cumberland to Pittsburg
West Newton
Cedar Creek Park
Smithton
Van Meter
Whitsett
Perryopolis
Layton
Roundbottom Campground
Linden Hall
Dickerson Run
Dawson
Vanderbilt
Adelaide
Connellsville
Dunbar
Bowest
Uniontown
Scottdale
Mount Pleasant
Greensburg
Jeannette
CHESTNUT RIDGE
PENNSYLVANIA
FORBES STATE FOREST
Great Allegheny Passage
Normalville
FORT NECESSITY NATIONAL BATTLEFIELD
Ohiopyle
Falling Water
OHIOPYLE STATE PARK
LAUREL RIDGE STATE PARK
Laurel Highlands Hiking Trail
LAUREL HILL
LINN RUN STATE PARK
LAUREL MOUNTAIN STATE PARK
KOOSER STATE PARK
Laurel Mountain Village
Bakersville
LAUREL HILL STATE PARK
Ramcat
Outflow Campground
Confluence
WEST VIRGINIA
PENNSYLVANIA
MARYLAND
Youghiogheny River Lake
Harnedsville
Pinkerton Tunnel 849' long CLOSED
Fort Hill
Markleton
Rockwood
Somerset
FORBES STATE FOREST
Mount Davis 3213ft 979m
SAVAGE RIVER STATE FOREST
Garrett
Salisbury Viaduct 1,909' long
Flight 93 National Memorial
Berlin
Salisbury
Meyersdale
Eastern Continental Divide
Keystone Viaduct 909' long
MEADOW MOUNTAIN
Sand Patch
MARYLAND
SAVAGE RIVER STATE FOREST
Great Allegheny Passage
Deal
Finzel
Highest point on the Great Allegheny Passage 2392ft 729m
Big Savage Mountain
Borden Tunnel 957' long
Big Savage Tunnel 3,294' long CLOSED from late November to early April to protect it from the weather. There is no easy detour.
Frostburg
Mount Savage
Wellersburg
Barrelville
Woodcock Hollow
Western Maryland Scenic Railway
Brush Tunnel 914' long
La Vale
Corriganville
Little Allegheny Mountain
DANS MOUNTAIN STATE PARK
Dans Mountain
WILLS MOUNTAIN
MARYLAND
WEST VIRGINIA
Keyser
Cumberland


N
SILVER SPRING
BETHESDA
GEORGETOWN
P Parking
W Water/Rest point
R Public restrooms
Trail access
Mile
Points of interest
Trail
Metro/Transit
Paved surface
Crushed stone surface
Connections
Future alignment
Connecting trails
0
1 mile

Greenbrier River Trail



The following is recommended:

- *Motor vehicles are not permitted on trail.*
- *Warning: Travel at your own risk.*
- *Bridges and tunnels may be hazardous.*
- *Leave nothing - Pack it in - Pack it out.*
- *Stay for Hours.*
- *Be considerate of adjacent private land owners.*
- *Stay on trail.*
- *When parking, do not block trail access or private drives.*

Bicyclists:

- *Fat tire bicycles are easier to ride.*
- *Ride on open trail only.*
- *Control your bicycle.*
- *Always yield trail.*

Equestrians:

- *Control your horse.*
- *Use caution on bridges and in tunnels.*
- *Avoid cross-country riding.*

Hikers:

- *Yield trail to equestrians.*
- *Allow equestrians and bicyclists to pass.*
- *Leave all wildflowers for others to enjoy.*

6 Marlinton to Clover Lick – 15.1 miles (24k)

Access to Marlinton - Located at the intersection of Rt. 219 and Rt. 39. Trail head at Depot in Marlinton.
Access to Clover Lick - Rt. 219 to Rt. 1 Back Mountain Road or Rt. 28 to Rt. 1/4 Laurel Run Rd.
Facilities - Marlinton is a full service area with all amenities including outfitters and hospital.
MP 56.1 - Marlinton, agency station/ existing depot visitors center.
MP 56.5 - Water Tank site. To be rebuilt.
MP 60.2 - August, flagstop, sawmill site.
MP 63.8 - Campsite w/table, fire ring.
MP 64.6 - Hunter, flagstop, sawmill site.
MP 65.2 - Greenbrier River Bridge built 1900.
MP 65.3 - Sharps Tunnel, 511 ft. long.
MP 69.6 - Campsite w/table, fire ring.
MP 71.2 - Clover Lick, agency station/depot on site. Access to Seneca State Forest.

7 Clover Lick to Cass – 9.5 miles (15.5k)

Access to Clover Lick - Rt. 219 to Rt. 1 Back Mountain Road or Rt. 28 to Rt. 1/4 Laurel Run Rd.
Access to Cass - Rt. 219 to Rt. 66E or Rt. 28 to Rt. 66W.
Facilities - Public phone, water, shopping and lodging in Seneca State Forest and Cass.
MP 71.2 - Clover Lick, agency station/depot on site. Access to Seneca State Forest.
MP 74.4 - Stony Bottom. Flagstop, sawmill site.
MP 76.8 - Stillington, agency station/depot.
MP 78.0 - Campsite w/table, fire ring.
MP 79.4 - Northern Trail Head, bike Deer Creek Rd. into Cass.
MP 80.7 - Cass Scenic Railroad State Park. Depot.

4 Beard to Seebert – 7.3 miles (11.5k)

Access to Beard - Rt. 219 to Rt. 20 Locust Creek Rd. or Rt. 31 Denmar Rd. in Hillsboro.
Access to Seebert - Rt. 219 to Rt. 27 Seebert Rd or Rt. 39 in Huntersville to Rt. 21 Beaver Creek Rd through Watoga State Park.
Facilities - Gas, groceries, food, public phone, lodging.
MP 38.5 - Beard, agency station/depot.
MP 39.3 - Denmar, flagstop, sawmill site. present medium security prison, formerly a state hospital.
MP 40.9 - Mill Run. Campsite w/table, fire ring.
MP 43.7 - Burnsides. Flagstop.
MP 45.8 - Seebert, agency station/depot. Access to Watoga State Park.

5 Seebert to Marlinton – 10.3 miles (16.5k)

Access to Seebert through Watoga State Park - Rt. 219 to Rt. 27 Seebert Rd or Rt. 39 in Huntersville to Rt. 21 Beaver Creek Rd.
Access to Marlinton - Located at the intersection of Rt. 219 and Rt. 39. Trail head at Depot in Marlinton.
Facilities - Marlinton is a full service area with all amenities including outfitters and hospital.
MP 45.8 - Seebert, agency station/depot. Access to Watoga State Park.
MP 48.1 - Watoga, flagstop, sawmill site. Site of old town of Watoga.
MP 49.4 - Campsite w/table, fire ring.
MP 51.5 - Campsite w/table, fire ring.
MP 52.1 - Buckeye, flagstop.
MP 54 - Wyatt Interpretive Trail.
MP 55.1 - Marlinton Municipal Park.
MP 56.1 - Marlinton, agency station/existing depot visitor center.

3 Renick to Beard – 13.7 miles (23.5k)

Access to Renick - Rt. 219 to Rt. 11 Auto Rd.
Access to Beard - Rt. 219 to Rt. 20 Locust Creek Rd. or Rt. 31 Denmar Rd. in Hillsboro.
Facilities - Gas, lodging, shopping, groceries, food, public phone and medical in Hillsboro.
MP 24.8 - Renick, agency station/depot.
MP 28.5 - Campsite w/table, fire ring.
MP 29.6 - Hornrock, flagstop.
MP 30.9 - Droop Mountain Tunnel, 402 foot long, completed May 1900.
MP 33.7 - Campsite w/table, fire ring.
MP 35.5 - Greenbrier/Pocahontas County line.
MP 36.9 - Spice Run, flagstop, sawmill site.
MP 38.5 - Beard, agency station/depot.

2 Anthony to Renick 10.7 miles (17k)

Access to Anthony - Rt. 219 to Rt. 21/1 (Anthony Rd.) 4 miles to trail head.
Access to Renick - Rt. 219 to Rt. 11 Auto Rd.
Facilities - Gas, food, lodging, phone in Renick.
MP 14.1 - Anthony, agency station/depot. Parking, USFS Boat Launch. Blue Bend Recreation Area is 4 miles east on Rt. 21/2.
MP 16.1 - Woodman, flagstop, sawmill site.
MP 17 - Dorner, flagstop, sawmill site.
MP 20.6 - Toilet.
MP 21.5 - Spring Creek Bridge, agency station/ sawmill site.
MP 24.8 - Renick, agency station/depot.

1 Anthony – 11 miles (18k)

Access to Trailhead - I64E take Lewisburg exit 169 to Rt. 219S 2 miles to Rt. 60E, 2.5 miles to N Caldwell & Greenbrier River Bridge. Left on Rt. 38 Stonehouse Rd 1.5 miles to trailhead parking. I64W take Harts Run exit 175 to Rt. 60W 2 miles to Caldwell. Cross Greenbrier River Bridge. Right on Rt. 38 Stonehouse Rd. 1.5 miles to trailhead parking.
Access to Anthony - Rt. 219 to Rt. 21/2 (Anthony Rd.) 4 miles to trail head.
Facilities - Lewisburg and White Sulphur Springs are full service areas with all amenities including outfitters and hospital.
MP 3.1 - Southern Trail Head. Parking.
MP 3.5 - Camp Allegheny, flagstop.
MP 4.7 - Campsite w/table, fire ring.
MP 5.6 - Hopper, flagstop.
MP 8.7 - Loopemount. flagstop.
MP 11.1 - Keister. flagstop.
MP 13 - Campsite w/table, fire ring.
MP 14 - Anthony, agency station/depot. USFS Boat Launch. Blue Bend Recreation area is 4 miles east on Rt. 21/2

legend

- Trail Sections
- Interstate
- US Route
- State Route
- County Route
- Trail Mileposts
- Trail Access
- Tunnel
- Camping
- Water
- Toilets
- Lodging
- Canoe Access
- Gas, Food, Phone
- State Park/ Forest

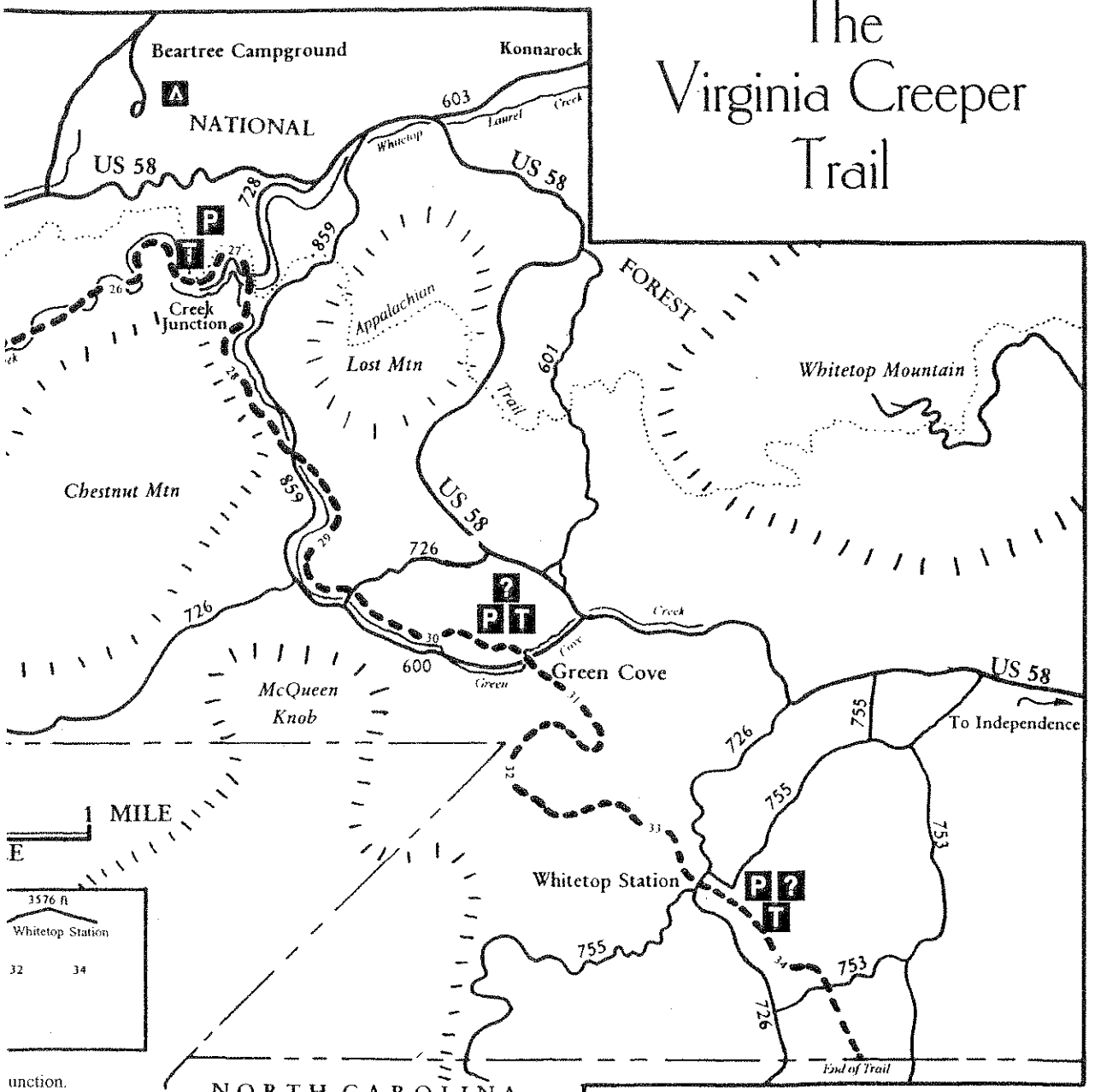
NOTE: Camping, water and toilet locations are indicated in trail section boxes.

NORTH

www.greenbrierrivertrail.com

l check traffic

The Virginia Creeper Trail



Legend P Parking ? Information (seasonal) T Toilet

A NATIONAL RECREATION TRAIL
Abingdon, Virginia to the North Carolina State Line

unction.
creation Area.
ccess.

st point - 3576 ft.

Donations to help protect and maintain this great natural and historic corridor may be made to the Virginia Ceeper Trail Club, PO Box 2382, Abingdon, VA 24212 www.vacreepertrail.org

THE VIRGINIA CREEPER TRAIL

The Virginia Creeper Trail is a public access, shared-use trail connecting Abingdon, Virginia with the Virginia-North Carolina border 1.1 miles east of Whitetop Station, Virginia. The total trail length is 34.3 miles.

The Virginia Creeper Trail began as a Native American footpath. Later, the European pioneers, as well as early explorer Daniel Boone, used the trail. Shortly before 1900, W.E. Mingea constructed the Virginia-Carolina Railroad from Abingdon to Damascus. In 1905, the Hassinger Lumber Company extended the line to Konnarock and Elkland, North Carolina. In its day, the line hauled lumber, iron ore, supplies, and passengers. Its nickname, Virginia Creeper, came from the early steam locomotives that struggled slowly up the railroad's steep grades. The Virginia Creeper engine and tender are now on display at the Abingdon trailhead. Virginia Creeper is also the name of a vine that grows prolifically in this area.

With 100 trestles and bridges, sharp curves, and steep grades, the Virginia Creeper was the typical mountain railroad. Train crews faced wash-outs, rock slides, and other hazards, but it was economics that sounded the line's death whistle. Having failed to turn a profit since the Great Depression, the Creeper ran its last train on March 31, 1977.

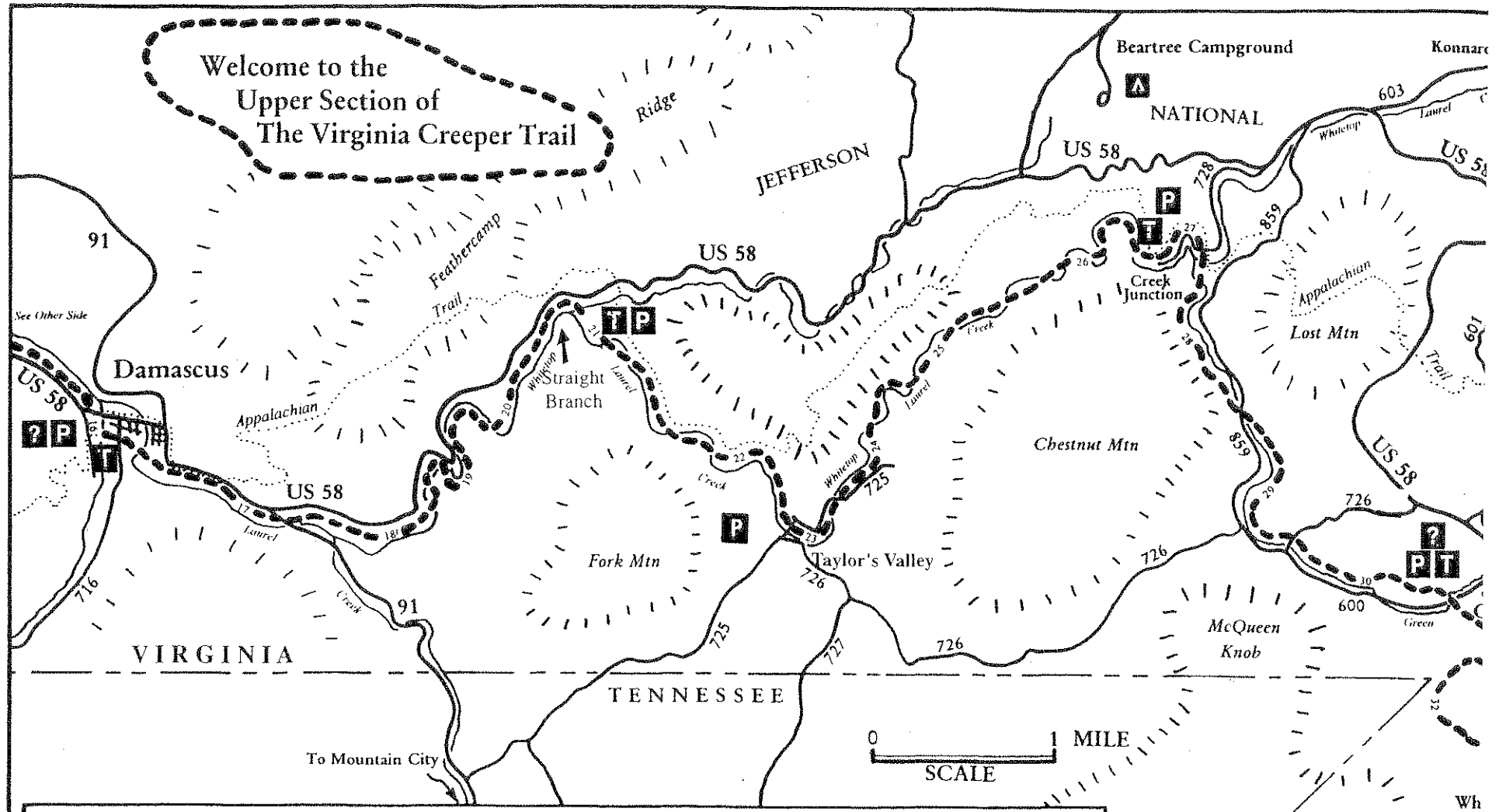
Less than a century after the railroad arrived, the Virginia Creeper once again became a quiet trail. Through the work of volunteers and with help from local and federal governments, the Creeper became a National Recreation Trail.

Between Abingdon and Damascus, the trail right-of-way belongs to the two towns. Although the public legally has the right to use the trail, most of the actual land between Abingdon and the Iron Bridge east of Damascus is privately owned. The 15.9 miles of trail between Iron Bridge (Mile 18.4) to the state line are part of the Mt. Rogers National Recreation Area in the Jefferson National Forest. Except for a short stretch through Taylor's Valley, the public owns both the right-of-way and the actual property.

The Virginia Creeper Trail traverses through some of the most rugged and picturesque scenery in the Eastern United States and is widely lauded as one of the most beautiful trails on the continent. Enjoy your visit!

For more information please contact:
Town of Damascus
P.O. Box 576 • Damascus, VA 24236
276-475-3831
276-475-3241 Fax
www.damascus.org

Bikers should stop at all intersections and check traffic



INTERESTING SITES ALONG THE TRAIL:

Mile 0.0 (trailhead): Site of Black's Fort, precedent of Abingdon.
Mile 0.5 (on right): Mansion of W. Robertson, early Virginia governor.
Mile 1.8 (both sides): Entrance to Great Knobs, views of Berry Creek.
Mile 3.7 (both sides): Long trestle, site of old Watauga station.
Mile 7.2 (both sides): Confluence of Middle & South Forks Holston River.
Mile 8.5 (on right): Alvarado, site of old station.
Mile 15.5 (both sides): Entrance to Damascus, Appalachian Trail junction.
Mile 17.5 (both sides): Iron Bridge, enter Mt. Rogers National Recreation Area.
Mile 19.5 (left side): Recreation Area facility, Appalachian Trail access.
Mile 23.0 (both sides): Taylors Valley. Daniel Boone campsite.
Mile 27.0 (both sides): Creek Junction, 563 ft. trestle.
Mile 30.5 (left side): Restored Green Cove Station.
Mile 33.4 (both sides): Reconstructed Whitetop Station and highest point - 3576 ft.

Donations to help protect and maintain this great natural and historic corridor may be made to the Virginia Ceeper Trail Club, PO Box 2382, Abingdon, VA 24212 www.vacreepertrail.org

tersections and check traffic

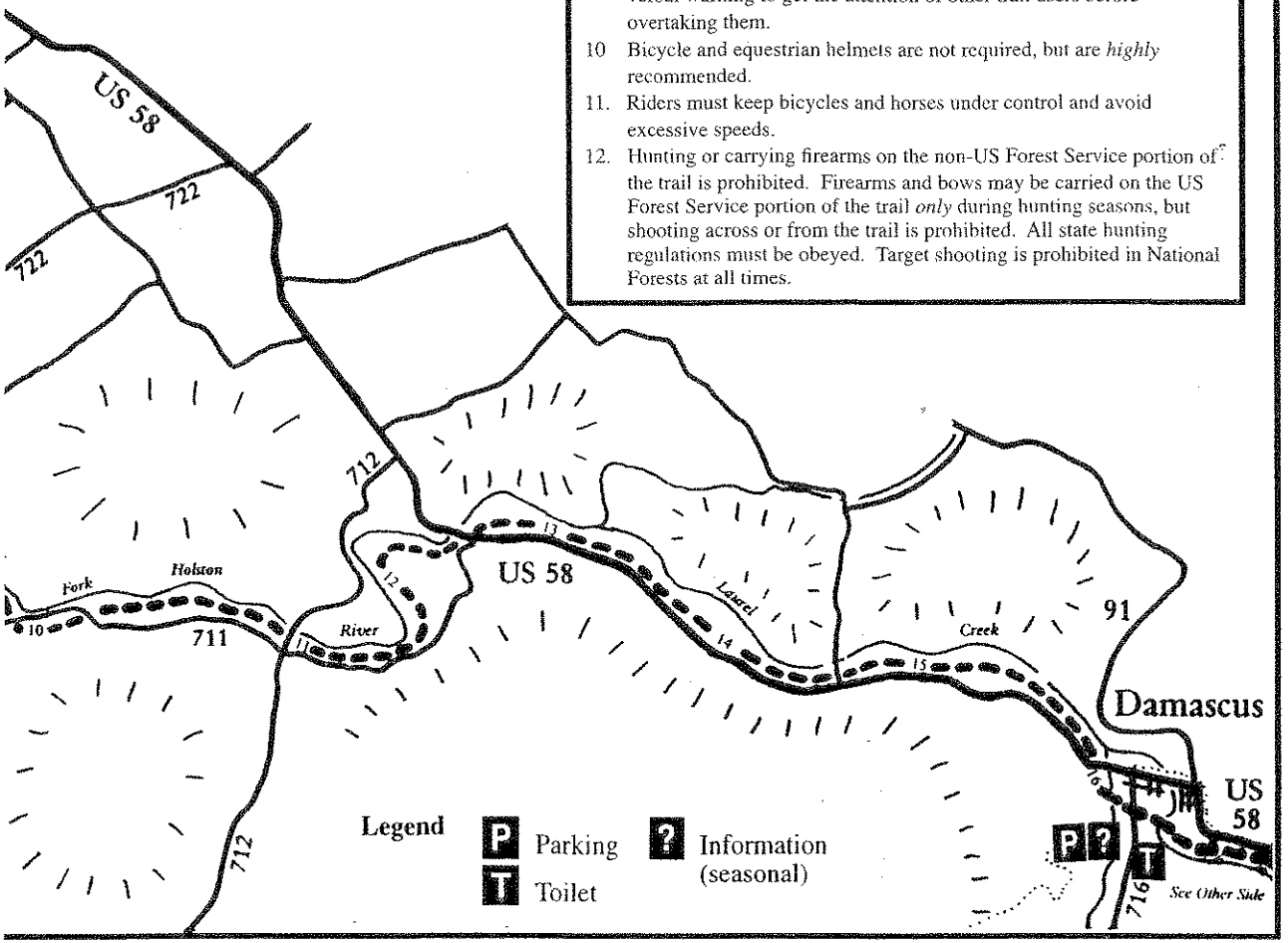
ne to the
wer Section of
he Virginia Creeper Trail

Maps by Ed Davis
a member of the
Geography Department faculty
Emory & Henry College

Although the public legally has the right to use the trail, much of the actual land is *privately owned.* **Stay on the trail, close any gates, respect all property and livestock, and be courteous to landowners and other trail users.** Please observe these

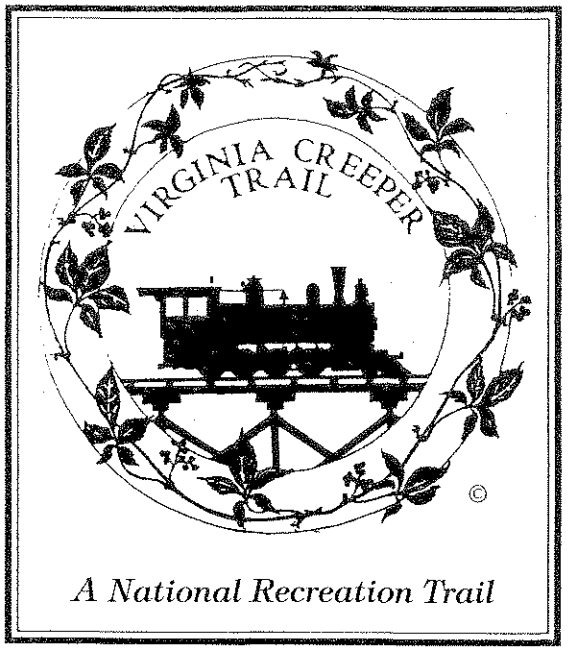
RULES OF THE TRAIL

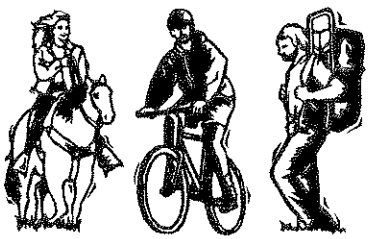
1. No littering-not even cigarette butts!
2. No motorized vehicles permitted on the trail.
3. Do not block any gates or park on the trail at any time.
4. Camping is allowed in most of the US Forest Service area, but only well off the trail. Camp on private property only with permission.
5. Dogs must be kept on a leash at all times.
6. Possession or use of fireworks, alcohol, or other illegal substances is prohibited.
7. Bicyclists and pedestrians should yield to oncoming equestrians. Equestrians should move over to allow bicyclists to overtake them.
8. Equestrians should dismount and walk horses across bridges and trestles. Bicyclists should use extreme caution when crossing trestles.
9. Bicyclists should use a non-intrusive bell, sounding device or give a verbal warning to get the attention of other trail users before overtaking them.
10. Bicycle and equestrian helmets are not required, but are *highly* recommended.
11. Riders must keep bicycles and horses under control and avoid excessive speeds.
12. Hunting or carrying firearms on the non-US Forest Service portion of the trail is prohibited. Firearms and bows may be carried on the US Forest Service portion of the trail *only* during hunting seasons, but shooting across or from the trail is prohibited. All state hunting regulations must be obeyed. Target shooting is prohibited in National Forests at all times.



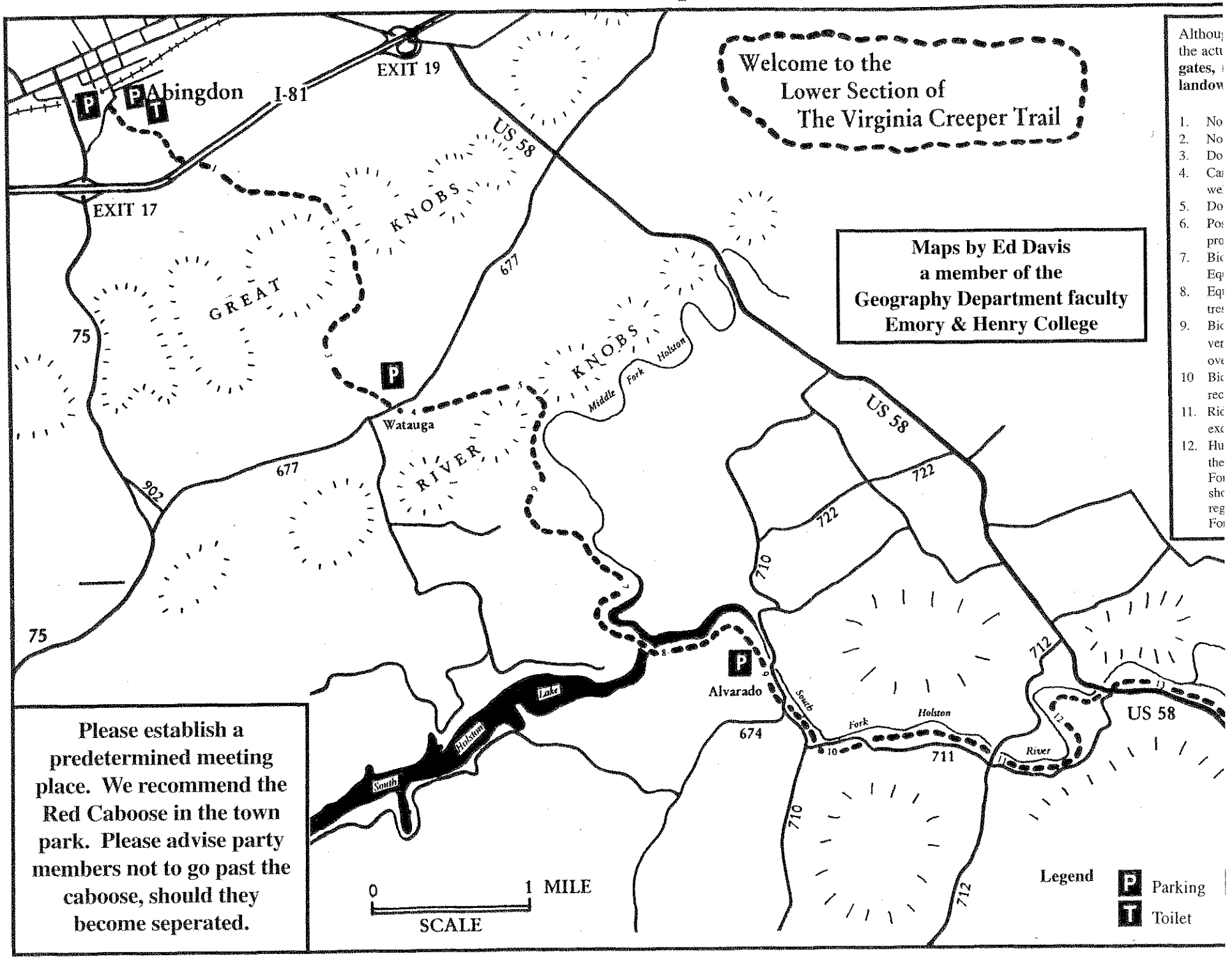
The Town of Damascus *Virginia*

A guide to the
Virginia Creeper Trail
www.vacreepertrail.org





Bikers should stop at all intersections and check traffic



Part travelogue, part documentary, "On The Canal" explores the wonderful C&O Canal towpath.

This charming 30-minute journey covers all 184.5 miles and is filled with practical advice and historical information.

Along the way meet the friendly faces and the sometimes quirky places. Relax and enjoy the sights, sounds and natural beauty that belong to us all.

- 2006 Hometown Video Awards winner Documentary Profile
- 2006 CAM Awards winner Outside Programming-Entertainment
- 2006 Videographer Awards Award of Distinction

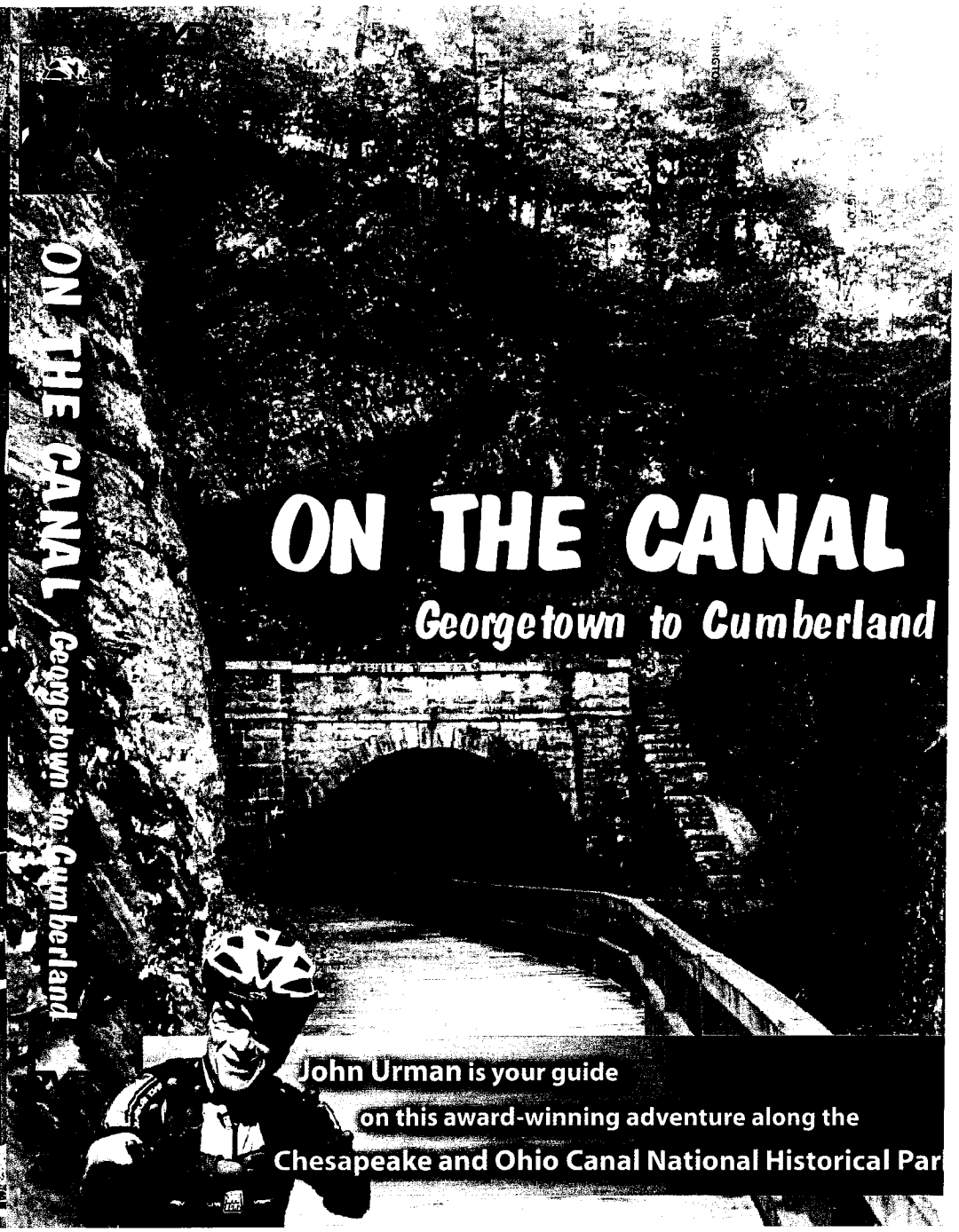
SPECIAL FEATURES

OUTTAKES & DELETED SCENES
Color. Approx. 4 minutes

"DOWN THE OLD POTOMAC"
Step back in time to 1917 and experience the Canal when hardy mules and noble Canal barges still moved their cargo to Washington. From the classic THOMAS A. EDISON COLLECTION. Courtesy: Library of Congress
B&W. Approx. 12 minutes

contact: youcubed@comcast.net

ON THE CANAL Georgetown to Cumberland



ON THE CANAL

Georgetown to Cumberland

John Urman is your guide on this award-winning adventure along the Chesapeake and Ohio Canal National Historical Par

ANNUAL C&O CANAL BIKE TRIP 2007

WELCOME TO THE ANNUAL C&O CANAL BIKE TRIP!

Once again, the Young Men of the Southern Maryland Wards are venturing forth on the C&O Canal.

The dates for this year's ride are **Wednesday, July 11th through Saturday, July 14th**. We are looking forward to this trip and the fellowship enjoyed by all who attend.

All participants are expected to read and follow the standards of "**FOR THE STRENGTH OF YOUTH**". Alcohol, tobacco and other harmful substances are not allowed. Proper behavior and respect for others and the environment are expected at all times.

As in the past, a team of experienced trail bosses will prepare all the food. You will not starve on this trip, in fact just the opposite - you will feast! All you really need to bring in this area are water bottle(s) for the trail and an appetite for the stops. All participants will be expected to assist cleaning up after meals and packing up gear before starting the ride each morning, and to participate in nightly devotional activities.

Details

Who?	Youth (14 years old and older), adults; Youth younger than age 14 must be accompanied by a parent or guardian in order to participate.
When?	Wednesday, July 11th through Saturday, July 14th 2007
Where?	180 miles of the C&O Canal, starting at mile 190 in Cumberland, MD (Alleghany County) and ending at mile 10 in Carderock, MD (Montgomery County)
Cost?	**$70.00 per rider** (covers meals, camp fees, fun, swimming, entertainment, transportation of personal gear while on the trail and a *limited edition* t-shirt (to be delivered at some point after the ride.) commemorating the trip. **Deadline for registration is June 24, 2007. After June 24th cost is $85.00 per rider.**
What equipment you will need to bring:	• 26" off-road bicycle • cycling clothes (padded shorts, gloves, sunglasses, *helmet) • water bottle(s) • tent (unless you're sharing someone else's tent) • sleeping bag • compass • swim gear • toiletries • comfortable clothes for camp • flashlight • camera (optional) • extra snacks (optional - but not really necessary since meals are plentiful and hi-carb snacks are provided for the riders while on the trail.) **(*required to be worn at all times while riding)**
What NOT to bring:	• Radio, cassette/CD player, etc. • portable video games • fireworks ((Anything of this nature that is found by leaders while on the trip will be confiscated by the trail bosses. So, LEAVE THIS STUFF HOME.))

ANNUAL C&O CANAL BIKE TRIP 2007

Schedule

Wednesday, July 11th	
10:00 a.m.	Meet at the Lexington Park meetinghouse; load bikes, food, and personal gear into trailers
10:30 a.m.	Depart (BE ON TIME or you'll be left behind!!!)
4:00 p.m.	Arrive in Cumberland, MD., Dinner at restaurant of your choice (several fast foods available).
5:00 p.m.	Depart Cumberland (mile **184**) and ride to Spring Gap campground (mile **173**).
7:30 p.m.	Set up camp
8:15 p.m.	Devotional
9:30 p.m.	LIGHTS OUT

Thursday, July 12th	
5:45 a.m.	Rise and shine. Pack up personal gear and load into trailers.
6:15 a.m.	Breakfast
7:00 a.m.	Hit the trail
12:00 p.m.	Lunch at Little Orleans (mile **140**)
4:30 p.m.	Arrive at Ft. Frederick State Park group camping area (mile **111**); set up camp; relaxation time (swimming, etc.)
6:30 p.m.	Dinner
8:15 p.m.	Devotional
9:30 p.m.	LIGHTS OUT

Friday, July 13th	
5:45 a.m.	Rise and shine. Pack up personal gear and load it into trailers.
6:15 a.m.	Breakfast
7:00 a.m.	Hit the trail
11:00 p.m.	Lunch at Dam 4 (mile **85**).
1:00 p.m.	Arrive at Antietam Creek campground (mile **69**) - group camping area and set up camp; relaxation time (swimming, etc.).
6:30 p.m.	Dinner
8:15 p.m.	Devotional
9:30 p.m.	LIGHTS OUT

Saturday, July 14th	
5:45 a.m.	Rise and shine. Pack up personal gear and load it into trailers.
6:15 a.m.	Breakfast
7:00 a.m.	Hit the trail
12:00 p.m.	Lunch at White's Ferry (mile **35**)
4:30 p.m.	Arrive at Carderock (mile **10**); unpack personal gear from trailer; load bikes into trailer; hook up with transportation home.
5:15 p.m.	Depart Carderock
7:00 p.m.	Arrive at Lexington Park meetinghouse; unload bikes and equipment; return equipment to storage area inside

Please fill out the registration form on the next page and get it with your fee to Robert Erickson no later than June 24th.

C&O Canal Bike Ride Participant Registration Form

EACH RIDER **MUST** HAVE A REGISTRATION FORM. ALL INFORMATION IS **REQUIRED**.

ANNUAL C&O CANAL BIKE TRIP 2007

Participant Information							
Name:				Age (if under 18):			
Address:							
City:				ST:	MD	ZIP:	
Telephone:		Email:				T-Shirt Size:	

T-shirt sizes are: (S) Small, (M) Medium, (L) Large, (XL) X-Large, (XXL) XX-Large, and (XXXL) XXX-Large

T-SHIRTS ARE NORMALLY READY A FEW MONTHS AFTER THE BIKE TRIP. A MAILING ADDRESS IS MANDATORY; IF DIFFERENT FROM ABOVE ADDRESS PLEASE PRINT ADDRESS ON THE BACK OF THIS FORM SO WE CAN MAIL YOUR SHIRT TO YOU.

Emergency Contact Information						
			Same as above ☐			
Name:		Relationship:				
Address:		Telephone:				
City:		ST:	MD	ZIP:		

I/WE, BEING THE PARENT(S)/LEGAL GUARDIAN(S) OF ABOVE PARTICIPANT, DO HEREBY APPOINT THE ADULT CHAPERONE (S) TO ACT ON MY/OUR BEHALF TO AUTHORIZE NECESSARY EMERGENCY TREATMENT.

Signature: _____ Date: _____
(parent or guardian)

Health Insurance Information			
Carrier:			
Name of Insured (if other than Bike Ride Participant:			
Group Nr:		ID Nr:	
Medical Concerns:			
Special Needs:			

***Helmets are required to be worn at all times while riding**. I HAVE **READ** AND AGREE TO ABIDE BY THE STANDARDS SET FORTH IN "**FOR THE STRENGTH OF YOUTH**". IF IT IS DETERMINED BY THE ADULT LEADERS THAT I HAVE VIOLATED THESE STANDARDS WHILE ON THE TRIP, I AGREE TO HAVE MY PARENT/GUARDIAN (OR THEIR DESIGNEE) PICK ME UP AT THAT NIGHT'S CAMP AND THAT I WILL NOT BE ALLOWED TO COMPLETE THE TRIP. I ALSO UNDERSTAND THAT THIS WILL ALSO RESULT IN A FORFEITURE OF MY TRIP FEE.

Signature: (Rider)	
Signature: (parent or guardian) Required for riders under 18 yrs of age	