



ETWC NEWSLETTER JUNE 2014

PROMOTE canoeing and kayaking as a water sport
TEACH boating techniques and water safety for river travel
PRESERVE our remaining wilderness rivers for future generations

Club Meeting

Next Meeting Tuesday, September 16, 2014 7:30 pm

Save the Date!

Details to follow.

Our latest club roster is attached and it includes our new graduates of our 2014 beginners clinics.



SPECIAL NEEDS CANOEFEST 2013

ETWC

P.O. Box 5774

Oak Ridge, TN 37831-5774

2014 OFFICERS

President	Ian Anderson	865-382-5723	nai.nosredna@gmail.com
Vice President	Diana Cochran	307-399-8415	dcochra1@utk.edu
Secretary	Jimmy Groton	865-805-9908	groton87@comcast.net
Treasurer	Kary Scarborough	865-483-7525	Kary_scarborough@att.net
Newsletter	Bill Lewis	865-387-7821	bill.lewis865@gmail.com
Roll Practice	Jason Darby	865-803-1899	wepaddle@bellsouth.net
Trip Coordinator	Ken Schneider	865-671-0673	ken48work@yahoo.com
Membership	Bill Wilder	865-603-7984	NBWilder@att.net
Conservation	Jimmy Groton	865-851-9087	Groton87@comcast.net
Safety	David Fox	865-483-5914	oakridgefox@aol.com
Kayak Clinic	Ken Schneider	865-441-5270	ken48work@yahoo.com
Webmaster	Billy Bob and Benny Hicks	865-386-6342	bghicks@pstcc.edu

Please keep your dues up to date!

If you want to pay online via PayPal, fill out the form at:
http://www.etwcweb.com/concrete/membership/online_form
 Or, send Kary your \$15 check payable to ETWC along with the membership form at the end of this newsletter to:

ETWC
P.O. Box 5774
Oak Ridge, TN 37831-5774

NEWSLETTER DEADLINE – 7TH OF EACH MONTH

Newsletter Editor: Bill Lewis
 Phone: 865-387-7821 Email: bill.lewis865@gmail.com
 Photos in jpeg, gif, or bmp format.
 Reports and Classifieds as a Word or Text File Document.
 Check out our website at <http://www.etwcweb.com>

River Gauges, see ETWC Forum
[AWW What's Running in East Tennessee](#)

East Tennessee Whitewater Club

Minutes

May 27, 2014

Clinic

We discussed last minute logistics regarding the clinic.

ETWC Waiver

We discussed and approved a request by member Cindy Kendrick to make slight revisions to the ETWC waiver to remove and revise potentially insensitive language from the waiver.

New T-shirt Design

We discussed and approved a new t-shirt logo.

Next Meeting

After the clinic the next regular membership meeting will be in September.

2014 ETWC KAYAKING CLINIC

By all accounts this year's clinic was a big success. Thanks to all of our volunteers and those who loaned equipment. Special thanks to this year's coordinator Ken Schneider.

There are photos posted on our forum at:

<http://s1282.photobucket.com/user/BillScarborough/slideshow/ETWC%202014%20Kayak%20Clinic>

Beginner trips are being posted to the club forum, check out:

<http://etwcweb.com/discuss/index.php?mode=thread&id=5728>

All of our beginners are encouraged to attend. If you need equipment or transportation just post to the forum.

Special Needs Canoe Day

The Special Needs Canoe Event will be held on Saturday June 28. David Fox is once again spearheading this event and is in need of volunteers. We need canoe drivers and kayakers; only one skill required, must be able to have a great time with these wonderful special needs kids. It will begin at 11am at the Clark Center Park on Melton Hill Lake (where we had the clinic).

Contact David by posting to the forum:

<http://etwcweb.com/discuss/index.php?mode=thread&id=5705>

Via email at: oakridgefox@aol.com

Or phone # (865)789-1777

ETWC T Shirts

Our long awaited ETWC club T-shirts have arrived and are available at a bargain price of \$15, going fast! They have a special design on the back. To reserve a shirt contact

Diana at: 307-399-8415 or dcochra1@utk.edu

or Ian at: 865-382-5723 or nai.nosredna@gmail.com

and give them your shirt size. See back of shirt graphics below!

Note that the Uncle Lem's logo was in appreciation of their generous gift of equipment for our club.

East Tennessee Whitewater Club



I'm repeating this from last month for the sake of our beginners.

Kary sends us this link to a good skills video that some of us should watch (not mentioning any names)

Troubleshooting Your Roll, <http://www.whitewaterdreams.com/archives/379>

Bimbo's Parking

We've car pooled from Bimbos at the 321 Lenoir City exit off of I-75 for years because they had good parking in their lower lot. Ted tells me that they have leased that lower lot and we shouldn't park there any longer. However, there is an abandoned shell station across the road where we can park. So, remember this for future meet ups.

Helmets and Brain Injuries

By Teresa Gryder

This article is the first of a three-part series for the whitewater paddler, on brain health. Part 1 is about helmets. The second part is about other strategies for reducing or preventing brain injuries, including fitness, nutrition, herbs. The third part is about first aid for brain injuries, including first aid, and knowing when the injury or sequellae require medical support.

Your brain may be important to you. The smarter you are, the more important you are likely to think it is. You can keep breathing and digesting without much of a brain, but you won't be there to enjoy it. There's a joke about how you should only spend as much on your helmet as your brain is worth. The truth is, even the very best of helmets is not going to keep your brain from getting injured if you go around banging it against the insides of your skull. This column starts with information about the brain, and continues with an overview of helmets for river runners. The two following columns offer more ideas about how to protect and rejuvenate your trusty brain.

If anybody has run a lot of rapids upside down, it's me. The list is long enough to be profoundly embarrassing. I have joked over the years about how my head makes a great rudder, and keeps me in the deepest flow. One of the jokes was that maybe I ought to just flip over at the top of each rapid and roll up at the bottom. For a long time I got away with it, floating through huge rapids upside down with nary a bump. Unfortunately, in the last couple of years the rocks have started getting in the way. I started having post-concussive symptoms, and I got interested in getting better. I'm stubborn about wanting evidence instead of just believing because someone else believes. And I know firsthand how delicate the brain is, and how easily we can hurt ourselves while playing on the water. I want to give you this information, because I know that you want to keep your mind as long as you can.

Research on traumatic brain injuries (TBI) has progressed dramatically in the last decade. The premature mental decline of the last generation of boxers and football players made sportsmen and doctors get serious about treating concussions and limiting post-traumatic brain pathology. Concussions are frightfully common, and brain injuries are the #1 cause of accidental death in people up to age 45. Repeated minor brain injuries are proven to contribute to mood disorders, chronic headaches, loss of cognitive function and an increased risk of Alzheimer's dementia. There is no substitute for prevention.

A bit of brain anatomy will help this all make sense. The brain is a soft organ floating in a bath of cerebrospinal fluid (CSF) inside the skull. When the skull moves, the brain sloshes around a little bit. One theory about why we like rocking chairs, and why autistic children rock, is that the sloshing is actually good for the brain. The brain is attached to the rest of you via the brainstem and the spinal cord. The brain has grey matter, and white matter. The grey matter is the cell bodies of neurons, where the synapses are, where the mental connections are made. The white matter is the transmission lines, bundled into nerves and tracts. The corpus callosum is the white matter that connects the left and right hemispheres of the brain to each other. The brain stem is white matter that goes down into the spinal cord from the brain. White matter is stiffer than gray matter, and in traumatic brain injuries, it is the most commonly injured part.

Young people's brains are especially vulnerable to injury, because the brain isn't done developing yet. Injuries can change the way a young brain develops. Active new wiring continues form into the early 20's. Adult brains are the toughest. Older adults brains get more vulnerable again, for two reasons. One is because as we age our brains tend to shrink inside the skull, leaving more room for the brain to twist and shake in there. The other reason is that older adults tend to have higher systemic levels of inflammation, which contributes to the ongoing damage to brain tissue after an injury.

Helmets are the first thing people think of for protecting brains. Helmets definitely reduce superficial injuries to the head, like cuts, scrapes and bruises. Helmets on motorcyclists dramatically reduce skull fractures and deaths. Most helmets do relatively little, however, for the brain itself. Paddling is a low speed sport compared to motorcycle travel, and skull fractures are rare. Paddlers are more likely to suffer from repeated minor knocks that bruise our brains just a little bit at a time. A helmet won't necessarily keep your brain from bumping against the inside of the skull, or from twisting on the brainstem. A helmet distributes a point force to a broader area of the head, but the brain bumps the inside of the skull with the same force whether the outside area of impact is large or small.

What makes a helmet actually protect the brain is impact absorption. In physics terms this means that in a collision you want your head to change speeds as slowly as possible. The stiff crushable foam that is in bicycle helmets will smash and absorb some of a high speed impact, but it will not cushion your brain from smaller impacts because it does not deform. Very thin foam is the worst, and it is common to find in the prettiest composite helmets. One solid whack without much cushioning can knock you out, and it's hard to swim to shore when you're unconscious.

Thick, layered foam or a sturdy suspension system in a helmet will do the most to reduce the impact of the brain against the inside of the skull. Suspension systems allow for ventilation inside the shell, and adjustability, and hence are used by most rafting outfitters. These are comprised of a head band with a harness of straps over the top of the head, all of which are anchored to the shell of the helmet. Suspension helmets used to be the helmets of choice, but foam liners tend to be preferred now.

The best modern whitewater helmets have layers of low and high density foam. Usually the softer stuff is near the head for comfort, and the firm foam is immediately inside the shell. Research continues on the question of which types of foam are best for which applications. In a boating helmet you want both a soft liner to absorb low speed hits, and high density foam for harder hits. Ask what kind of foam is used in the helmets you consider, and choose VN above EPP. Avoid EPS foam (styrofoam) which can be permanently dented with a fingernail and destroyed with a single hit.

It is possible that the flex or breakage of a helmet shell will dissipate some force of a collision. Plastic helmets are more flexible and tend to deform, whereas composite helmets can break or shatter, and either mechanism is using up some of the energy of the hit. The impact absorption of either kind of shell is minimal compared to the impact absorption capacity of a quality suspension

system and padding material. When considering your next helmet purchase, find one with thick padding or a springy but strong suspension system.

Fit is also extremely important. The helmet must fit snugly and stay on your head for impact-absorbing features to work. Test it well and be sure that the foam or headband is snug, and the neck straps adjust to fit you. A loose neck strap can allow a helmet to slide back on the head, exposing the forehead. If you have access to a firehose, your kids will be happy to see if they can knock the helmet off your head with it.

Coverage is another important feature of helmets, though it mainly prevents superficial injuries. For class V most paddlers opt for a full coverage helmet, which covers the back of the head (occiput), forehead, temples and ears. Ear coverage can interfere with hearing, so make sure your helmet choice allows you to hear when you need to. On class I-III runs, you see a mixture of half-coverage helmets which leave the ears and temples exposed. The unfortunate truth is that you can wish you had a class V helmet on class II water. One of our local paddlers can attest to this, after having his cheekbone turned inside out on a class II section of the Sandy this spring. To protect the face, some paddlers opt for a "full face" helmet that has an extension in front of the jaw, and others choose to add a wire "face mask" to a regular helmet. A rigid visor will protect the forehead and sometimes the nose, but not the chin. Full face coverage can interfere with your ability to see the river; there is always a tradeoff.

Durability may be a lesser concern, but we like to get a lot of use out of our equipment. The outer shell of a helmet is the part we tend to destroy. Composite helmet shells (fiberglass, kevlar, carbon fiber) have good abrasion and UV resistance, but can be shattered by one major impact. Some people call them "single use" helmets. Most composite helmets can withstand many minor impacts without shattering, but they may be accumulating inner-laminar failures that are undetectable to the eye, yet could cause failure. Internal weaknesses in composites can sometimes be seen on an x-ray. Paddlers will sometimes talk about the relative puncture-resistance of helmets, and for this application a laminate containing kevlar is ideal. Kevlar might even be bullet-proof, though most of us aren't provoking armed attacks while paddling. Carbon fiber is ultra-light, but its use in helmets may be more for marketing than function, as it tends to be brittle. Composite helmet shells may be stiffer than we need, but they are the prettiest, with bright colors and sparkly gel coats.

Plastic helmets are much more widely used than composites, because they are generally much cheaper. Plastic helmets might be destroyed by a single major impact, but it would have to be a big one. In general they are quite flexible and spring back from impacts without damage. The weakness of plastic helmets is the degradation of the plastic due to UV exposure and the gradual outgassing of softeners. There are widely different plastics available. Surlyn is one excellent polyethylene that is used for helmet shells. The jury is still out on how Surlyn competes with fiber-reinforced thermo plastic. Plastic helmets designs can include ventilation and drainage holes which are much enjoyed in warm climates. Perhaps the most important thing about the shell of your helmet is that it is large enough to allow ample paddling inside it. If you break it, be glad you broke that and not your skull.

A helmet will not work if you don't wear it. On rafting trips the helmet is to protect you from the other people (and paddles) in the raft. Some canoeists think that they don't need a helmet. Maybe, if you paddle class II or less, and you have no intention of trying to roll, your risk is low enough to not require one. I don't know about you, but I like to wear my helmet whenever I get near a car with roof racks on it. There is hardly any point in having a helmet with you if it is not on your head. Perhaps the most important thing about a helmet in general is that it needs to be comfortable and good looking enough that you will wear it. You just never know when an asteroid might fly in from outer space delivering a knockout blow.

That's the basics of helmet for whitewater paddlers. If your brain is working at this moment, you know that your goal #1 is to avoid hitting your head in the first place. If you do hit your head, you

will be glad if you are wearing a quality brain bucket that disperses the force and saves both your skin and your brain.

SIDEBAR

CE 1385: THE ONLY EXISTING STANDARD FOR WHITEWATER HELMETS

Some Components of CE 1385 Certification:

- 1) Impact testing under specified velocity, dependent on sport. All impacts must measure under 250 G's for 30 milliseconds, but in the US the limit for bike and other helmets is 300 G's. This test is performed by dropping the helmet on an anvil with a headform inside it that contains an accelerometer. The drop test is repeated on different aspects of the helmet and the anvil.
- 2) Retention system test. This is a dynamic test to see if the buckles or straps fail when a load is applied.
- 3) Roll off test. The edge of the helmet is loaded with a dropped weight, and must not flex more than 30mm.
- 4) Impact testing under varying environmental conditions including submersion in water, UV exposure, extreme cold for ski helmets, etc.
- 5) Sizing. The helmets are sized according to which headforms they fit.
- 6) Labeling and tracking requirements.
- 7) There can be no uncovered internal protusions inside the shell.
- 8) The helmet has to float.

For more detailed about helmets and standards , search here:

<http://www.bhsi.org>

<http://global.ih.com/standards.cfm?publisher=ASTM>

<http://www.bsigroup.com/en-US/>

FOAM SIDEBAR

VN foam is used in some hockey and football helmets, and it is equal to or better than EPP foam at 1-6 impacts in the same location. EPP is expanded polypropylene which rebounds from indentations and is quite durable, except for being flammable. It looks like styrofoam (EPS, expanded polystyrene) which is brittle and crushes with a single impact.)

SOME BRAND NAMES OF HELMETS

Cascade <http://www.cascadehelmets.com/> Hockey helmets come standard with face mask.

Sweet (Rocker Full cut) (ASTM 1385 cred)

Head Trip (ASTM 1385 cred)

WRSI (available from NRS, good price for the product, EJ uses the Trident)

Gath

Shred Ready (Standard Full cut) (ASTM 1385 cred)

Grateful heads (composite shells with moderate foam lining, pricey)

J3

Protec (good coverage but thin padding in a classic plastic shell)

Ace (lightweight helmets used by slalom racers in the 80's)

HISTORIC HELMET BRANDS

Prijon / Wildwasser (no longer available)

Romer (no longer available)

Seda

ETWC Forum

Check out the discussions on our forum:

<http://etwcweb.com/discuss/>

Roll Practice Friday Nights, Oak Ridge at Clark Center on Lake

Remember roll practices on most Friday nights at the Lake.

Please post to the forum if you plan to go to be sure others will be there.

We meet around 6pm or when we get off work at the Clark Center Put in (where we held the clinic).

Trip Reports!

Summer is HERE, and we want to tell everyone about our adventures. Send trip reports to Bill, including videos if you have them!

Please send reports to Yours Truly at bill.lewis865@gmail.com.

PROGRAMS

We are always looking for interesting programs for our meetings. If you have a program or an idea please contact Dianna Cochran at 307-399-8415 or dcochra1@utk.edu.

**EAST TENNESSEE WHITEWATER CLUB
MEMBERSHIP & RENEWAL FORM**

Dues: \$15.00 Yearly Family Membership (*January 1 renewal date*)

Send to: East Tennessee Whitewater Club, P.O. Box 5774, Oak Ridge, TN 37831-5774

Name(s) _____

Address _____

_____, _____ Zip _____

Phone: (H) _____ (W) _____ Email _____

I would like to receive my newsletter by email. (circle) Yes No

Membership Status? (circle) New Renewal

What boats do you paddle? (circle) Kayak C-1 C-2 Solo Canoe Tandem Canoe

What is your paddling ability? (circle) Beginner Intermediate Advanced Expert
Class I-II Class III Class IV Class V

RELEASE AND WAIVER OF LIABILITY

I, _____, desiring to join my fellow paddlers in the East Tennessee Whitewater Club (ETWC), do hereby declare that I fully understand and accept the following facts of life on the river:

1. Canoeing, kayaking, or rafting, particularly on whitewater rivers, exposes the participants to various safety hazards, including but not limited to, water hazards (boulders, undercut rocks, trees, strainers, water formations such as water falls, holes, keepers, hydraulics, and other obstacles), swimming in turbulent water, using paddling equipment, accidents or illness in remote places without medical facilities, and travel in a vehicle not driven by me.
2. No one but I am responsible for my safety when I choose to paddle a particular river or a particular rapid.
3. I further understand that I have no legal duty to assist others, nor does anyone else have a legal duty to render such assistance to me. I certify that I am in good physical condition, that I can swim, and that I have no physical defects or injuries that would prevent me from participating in this activity. I fully understand and agree that, when I participate in canoeing, kayaking, or rafting, there is always the possibility of unknown, uncontrollable dangers and accidental or other physical injury and death. I know I can be killed, and I willingly assume the risks referred to in Paragraph 1 and elsewhere in this release.

Therefore, in consideration for granting me the right to join and participate in ETWC activities, and intending to be legally bound, I hereby release, waive and discharge my right to sue ETWC, its trip coordinators, instructors, leaders, officers, directors, representatives, agents, employees, and affiliates, and also any landowner or governmental unit which may allow ETWC to use its property, for any and all loss or damage on account of injury to my person or property or on account of my death, which may occur during, in preparation for, or in transit to or from an ETWC activity.

I further understand that ETWC carries no insurance for the protection of participants in whitewater activities, and any insurance coverage existing with respect to ETWC shall not alter the terms of this waiver nor impose any liability on ETWC.

This waiver applies only to acts or omissions of ordinary negligence and to any deliberate act intended to promote my safety or well being.

This waiver is signed by me in the interest of permitting ETWC to exist and to serve the paddling community, and to enable me and my fellow paddlers to feel free to donate their services to improving the sport and to help in training those less skilled in the sport without fear of liability.

I HAVE CAREFULLY READ THIS RELEASE AND FULLY UNDERSTAND ITS CONTENTS. I AM AWARE THAT THIS IS A RELEASE OF LIABILITY AND I SIGN IT OF MY OWN FREE WILL.

Signature: _____ Date: _____

Signature: _____ Date: _____

(Parent or guardian if participant is under 18 years of age)