

Fort Worth

Fly Fishers

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Message From the President

If you have not had the opportunity to purchase your kayak raffle tickets, you will want to do so soon! Back by popular demand, this year's kayak raffle will offer the chance at one of two kayaks or a pontoon boat. For just \$20 a ticket (3/\$50 or 6/\$100), you have a chance at any of the three items for raffle. For tickets, contact Mr. Bill Hodges at bcollhodes@aol.com. You can also purchase tickets on the club's [website](#) by signing in and clicking on the Sept. 18, 2021 Kayak Raffle event on the Calendar and clicking "Register."

As we look forward to 2022, **the Fort Worth Fly Fishers Board of Directors is seeking interested volunteers for several roles.**

Opportunities are available to serve on the board or to become an engaged volunteer in areas ranging from social media to conservation. Interested in special events such as Flyfest 2022 or the annual auction? We have some great opportunities to be a part of making the club activities and goals come to life. If you would like to discuss time requirements or opportunities, I will be happy to spend some "no obligation" time with you and explore ways your talents and skills can contribute to our continued success.

Fall is typically a busy time for Fort Worth Fly Fishers and this year is no exception. On Sept. 7, we will conclude our **Summer Learning Series** with a casting clinic held at Monticello Park in Fort Worth. Specific directions will be emailed in the coming days.

On Sept. 24-26, the club has been invited back to the Bill Ward Ranch near Mexia for three days of fishing, food and fun! Those of you who have participated in this event in the past few years know the quality of these waters and the great time had by participants. Look for more details in this newsletter and further email communications. Covid waivers will once again be required for this event. **If you have not previously provided us with a signed**

Continued on page 2.



Lake Ray Roberts Conservation
Read more on page 7.



It's All About the Fishing
Read more on page 8.

Covid waiver, we will ask you to do so prior to your participation. Waivers can be found on the website at fortworthflyfishers.org.

Don't forget! We will be returning to the Lower Illinois River near Gore, Okla., on Nov. 19-21. We have reserved a block of rooms at the Blue Door Resort. **You'll want to make your reservations soon as this is a popular event, and the venue has historically been a sellout. You can do it online by signing in on our website and clicking on the Calendar.**

If you haven't registered for the **Dutch Baughman online Flyfishing Skills I & II Classes**, there is still time. Both the Skills I and Skills II classes will begin on Sept. 16 and run for 10 weeks. You must be a current paid member of the Dallas or Fort Worth Clubs to participate in this event. If you attended the Fly Fishing Skills classes last semester and want to attend the classes again this semester, just send Dutch an email at dutch.baughman@gmail.com so he can build the class email list for the weekly Zoom access link. In your email, be sure to indicate which class you want to attend. If you did not attend the classes last semester, please contact me at president@fortworthflyfishers.org if you are a member of the Fort Worth Fly Fishers or contact Jack Gillis at jackgillis@outlook.com if you are a member of the Dallas Fly Fishers. Look for more information in this newsletter.

And finally, with disappointment, **I announce the FWFF Annual Auction has once again been postponed until next spring.** The schedule and timing were discussed extensively in our last Directors meeting and in the end, the safety of our members, vendors, participants, and venue operators drove our decision. These decisions are tough and the final go/no go commitments must be made weeks in advance with substantial resource commitments. With the Delta variant on a troubling trajectory, we felt it was best to not proceed at that this time. In lieu of the auction previously scheduled for Sept. 18, we will host several great offerings in an online auction in the coming months. Stay tuned for links to the virtual events and again, we appreciate your patience during these difficult circumstances.

Stay well,
David Hooper, President

Sept. 7 Membership Meeting Offers Fly Casting in Fort Worth's Monticello Park

On Tuesday, Sept. 7, at 7 p.m., Fort Worth Fly Fishers will hold the third part of our three-part Summer Learning Series, the casting clinic. Stephen Woodcock and Brett Delk of Orvis Fort Worth have volunteered to host the event.

The clinic will offer a wide range of instruction levels to accommodate participant needs. From lining a rod to

improving advanced skills, this is a great opportunity to begin your casting journey or improve on your current skill level. The clinic will be held in Monticello Park in Fort Worth and will run until dark. Don't miss this chance to get some great instruction while spending time with fellow club members. Please bring your favorite rod and lawn chair if desired.



Memorial Donations

We would like to remind members that it is possible to make a donation to the club in support of our operations and the various causes we support. Recently, Outings Director Chris Patnode chose to make a donation in memory of the late Ken Prehoditch, friend and fellow Fort Worth Fly Fishers member who was killed in an auto accident in June.

FWFF members may make a donation at any time on the club's website. It's simple and secure. Just go to the [Donations](#) page (listed under "About Us" on the home page, click on the "Donate" button and follow the instructions. And thanks.

FORT WORTH FLY FISHERS

KAYAK/PONTOON RAFFLE 2021

***3 Chances to Win**

CONTACT BILL HODGES FOR TICKETS: bcolhodes@aol.com

1ST PRIZE

JACKSON "MAYFLY" 2019

Color: Color to Be Determined



The 2021 Mayfly is a fly fishing oriented sit-on-top, loaded with features to make kayak fly fishing more fun and user friendly. The MayFly has a versatile hull optimized for tracking, stability, and speed in popular fly fishing conditions and destinations, including tropical flats, slow-moving rivers, lakes and ponds. Recognizing the unique challenges faced by fly fisherman, particularly fly line management, the MayFly includes a myriad of design aspects to address the needs of fly fisherman creating the ultimate kayak fly fishing platform. Snag-free footrests and features, protected fly box storage, unique fly rod storage options, rod butt props for dealing with tangles, integrated and protected fly patches, and more cater to the high-performance features expert fly fisherman need while being versatile and stable enough to bring new anglers to the sport.



- NEW Elite Seating System
- Snag free wide open standing area
- Snag free one-piece foot brace system with line anchor to secure fly line while paddling
- Large stern well designed for JKooler or Orion 25 Cooler
- Snag free bungee flip down fly box holders lined with foam
- Storage for fly gear like nippers, forceps and tippet
- Bow hatch storage bin for fly vests, hip packs, or others items for easy access when wade fishing
- Hi-Lo, trimmable seating
- Aluminum accessory tracks
- Raymarine transducer scupper
- Standing pad
- Specialized fly rod storage with molded in reel pockets
- Rod butt props to help with line tangles

**SEE SAMPLE
AT
"FLYFEST"
MARCH 13**

2nd PRIZE

KI LAGOON 10XL

Color: To Be Determined



FEATURES OF LAGOON 10XL

Deck Pad, Skid Pad, Drain Plug, Cup Holder, Paddle Holder
Three Hatches, Perimeter Rope, Handles and Tracks,
Scuppers and Scupper Plugs, 2 Flush Mount Rod Holders
High/Low Metal Frame Seat, Removable Center Rod Holder

Length 10' Capacity 300 Lbs Width 33" Weight 55 Lbs

3RD PRIZE

CLASSIC ACCESSORIES -ROANOKE

8' Inflatable Pontoon

Color: Blue

features 2 armrest pockets,
this boat has room for all your gear.
With oars and a padded swivel seat, this
boat includes everything you need to get
out to the lake in comfort.

- Supports up to 350 lbs. (person and gear)
- Suitable for Class 1 river use
- 96 in. Long x 55 in. Wide x 27.5 in. High (to top of seat)
- Weight 39 Lbs



**1 TICKET \$ 20
6 TICKETS \$ 100**

Drawing WILL occur at Sept. 18, 2021, Wild Acre Brewery Company

Attendance not required to WIN.

www.jacksonkayak.com

www.kayakinstruction.com

www.fortworthflyfishers.org

Fly Fishing Skills Classes Begin Sept. 16 via Zoom

The next Fly Fishing Skills classes will begin on Thursday, Sept. Once again, we will conduct classes via Zoom. Here's the line-up:

- Fly Fishing Skills I -- begins at 5:30 p.m. and adjourns by 6:45;
- Fly Fishing Skills II -- begins at 7 p.m. and adjourns around 8:30;
- Both classes last 10 weeks, concluding on Nov. 18

Fly Fishing Skills classes are offered through the Fort Worth Fly Fishers education program and are available to **paid members** of Fort Worth Fly Fishers and Dallas Fly Fishers. If you attended the classes last semester, you are approved for attendance this semester. New members to either club are welcome, but please contact David Hooper at Fort Worth Fly Fishers or Jack Gillis at Dallas Fly Fishers.

Both classes have been enhanced since last semester. Students for each class will receive an updated version of the entire slide presentation prior to the first class. Slide decks now have a complete Table of Contents so you can find specific topics by using the slide number as a reference. The entire curriculum from last semester has been critiqued and updated. We are also planning to have in-person casting sessions during the semester. If possible, we might also have in-person lab sessions for fly fishing knots

The curriculum will include a complete array of the comprehensive topics presented last semester, but with some additional enhancements:

Fly Fishing Skills I:

- More fly fishing video
- Expanded sections on fly fishing history, fly fishing equipment, rigging, reading the water and water column, stream anatomy, entomology and fly fishing trips
- NEW topics on "Search Image" and feeding behavior
- Slide decks for Fly Fishing History, Reading Water and the Water Column, Fly Fishing History, Entomology, Fly Fishing Safety, and Fly Fishing Etiquette

Fly Fishing Skills II:

- More fly fishing video
- Identify This Fish
- Identify This Fly
- Identify This Knot
- Expanded sections on casting, fly fishing trips, fish species, knots, stream anatomy, safety and etiquette

- More emphasis on the catching (set the hook, play the fish, handle the fish, revive the fish, release the fish)
- Revised sections on fly selection, fish behavior and fish habitat
- NEW topic on "Search Image"
- Slide decks for Line Management, Reading Water and the Water Column, Fly Fishing History, Entomology, Fly Fishing Safety, and Fly Fishing Etiquette

If you attended the Fly Fishing Skills classes last semester and want to attend the classes again this semester, just send me an email at dutch.baughman@gmail.com so I can build the class email list for the weekly Zoom access link. In your email to me, be sure to indicate which class you want to attend. If you did not attend the classes last semester, please contact David Hooper if you are a member of the Fort Worth Fly Fishers or contact Jack Gillis if you are a member of the Dallas Fly Fishers.

Please contact me if you have any questions.

Dutch Baughman
FWFF Member
dutch.baughman@gmail.com

Oktoberfisch is Coming!



Since FWFF has no October outing scheduled, members are encouraged to participate in Oktoberfisch, Texas Hill Country Fly Fishers' annual fall festival. This year Oktoberfisch is set for Oct. 15-17 at The Edge Resort, 3567 US 290 East, in Fredericksburg. One ticket (\$45 adult, \$25 youth age 12-17) covers all exhibits, classes and river access. Click [here](#) for more information.

September Outing Returns to Bill Ward's Ranch near Mexia



Kay Jackson pulled in this largemouth at a past outing to Bill Ward's Ranch.

It's time for another of the club's all-time favorite outings – the overnighter to Bill Ward's Ranch near Mexia (pronounced muh-HAY-uh). Dozens of you attended the dedication of the plaque for the late James Parker on April 24 this year, including several new club members. And the fishing was stupendous! So we decided to do it again Sept. 24-26.

The clear, water-filled quarry at the campsite is easily traversed and it leads to many other lakes on the property. Bill wants to remove some of the population of bass and sunfish -- and we are just the group to do it -- but any bass over 4 pounds must remain in the water. Additionally, Bill's friend, Kent Yelverton, allows us to fish his lake across US 84.

Camping in an RV or a tent is the easiest, but some may seek accommodation in Mexia's very nice motels a few miles up US 84 East. The Comfort Inn is the nearest. There are a few hook-

ups for electricity at the quarry so you may want to bring an extension cord for CPAPs or small appliances.

Bring your camp chair as well. As of this writing, there will be a fish fry on Saturday night, and a breakfast is usually prepared early Sunday. If you have an electric filet knife, please bring it. Bring other food as you would any camping trip.

A float tube, kick boat, kayak or canoe is highly recommended, but not required. There are limited bank fishing opportunities. Don't forget a stringer for the fish fry. A 4-weight to 6-weight rod should handle anything in the quarry and surrounding ponds. Either a floating or sinking line will do, but a sinking or sink tip line works best in the deeper water. We recommend nymphs, streamers, poppers, bass bugs and terrestrials to entice the fish.

If you have any questions, please contact outing host Bill Hodges at bcolhodes@aol.com, or Outings Director Chris Patnode at the September membership outing. As always, an RSVP is appreciated so we have an idea how many attendees to expect.

The only thing tricky about this outing is getting there. It's not a GPS-friendly location, so here are some directions:

- From Fort Worth, take Interstate 35W south to Hillsboro, then Texas 171 east to Coolidge;
- Go west from Coolidge on Texas 73, proceed to FM 2310, and turn left (south);
- Go about six miles to US 84, then left (east) on US 84 towards Mexia. Cross over Lake Mexia and continue about a mile to the intersection of County Road 2681 and 199/198. Turn left (north) on 199/198 and then left again in a block;
- Follow it around the curve and go less than a mile to the top of a hill. **Look for the maroon gate on the right.** It should be open.
- Follow the road past Bill Ward's house and down to the lake on a grass road.

See you there!

Bill Hodges
FWFF member

In November, FWFF Returns to Blue Door Cabins at Lake Tenkiller in Gore, Okla.

On Nov. 19-21, Fort Worth Fly Fishers will travel again to beautiful Gore, Okla., along the banks of the Lower Illinois River where striper, trout, catfish, gar, common carp, buffalo carp, crappie, drum and multiple bass species are plentiful. It's not that far away – just think of the cool temperatures by then! – and you need to move now if you want a spot.



Daniel Tatum with an Oklahoma drum

FWFF has rented the entire 12-cabin facility, which is approximately four hours northeast of Dallas/Fort Worth and sports an outdoor courtyard, fire pit, refrigerator, BBQ smoker and pizza oven for our enjoyment. Cost is \$105/member or \$210/cabin for two nights in clean, comfortable and well-equipped cabins.

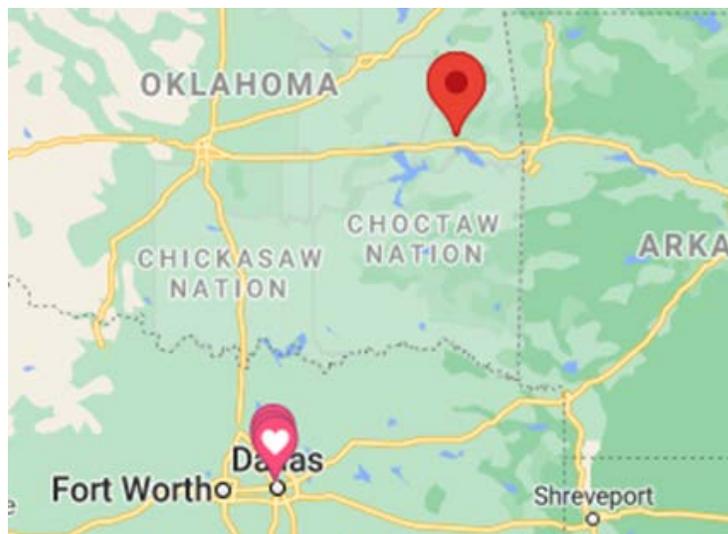
Members will have the opportunity to fish the Lower Illinois River, Upper Illinois River, Tenkiller Lake or venture into nearby Arkansas for a day trip. The opportunities for adventure are endless, much like the species in the water. Kayaks are available from the lodge for \$25 a day. The club will provide dinner for members in the courtyard Saturday night, when fish tales over a warm fire will be shared.

Contact Outings Director Chris Patnode at 817-819-5519 if you have questions. You can register and make a payment online using the FWFF online event calendar (www.fortworthflyfishers.org) to reserve your cabin now. Mark your calendar and book your cabin now before they are gone!!

Details, links and contacts:

- An Oklahoma fishing license is required. Check for other regulations as well, before arriving.

- Blue Door at Ten Killer - 98413 Hwy. 100, Gore, Oklahoma 74435; <http://www.bluedoorsattenkiller.com/>
- Coordinates • [35.5884616051, -95.0701864112](https://www.google.com/maps/place/35.5884616051,-95.0701864112)
- [Town of Gore](https://www.google.com/maps/place/Town+of+Gore,+OKLAHOMA) | "THE TROUT CAPITAL OF OKLAHOMA"



Chris Patnode with an Oklahoma catfish

Chris Patnode
FWFF Outings Director

Lake Ray Roberts Conservation Project Update

Last year, FWFF agreed to participate in a conservation project on Lake Ray Roberts aimed at encouraging native aquatic plants to spread and improve fish habitat. Our past Conservation Director, Emily Craig, initiated the club's participation. While the pandemic meant club members were unable to participate in the work of placing the plant nurseries, the project was carried out by Texas Parks and Wildlife Department staff in July, Emily reports.

Using a \$1,000 grant from Friends of the Reservoirs, TPWD purchased and installed three large buoys in Lake Ray Roberts. Each buoy can support four wire baskets of plants, which had earlier taken root in their containers and now were essentially "aquatic hanging baskets," according to TPWD. FWFF made a small contribution towards hardware used in the project.

TPWD will monitor the buoys and plants to document their impact on the lake's fishery, primarily largemouth bass, crappie, bluegill, sunfish, catfish, white bass and spotted gar, Emily says.

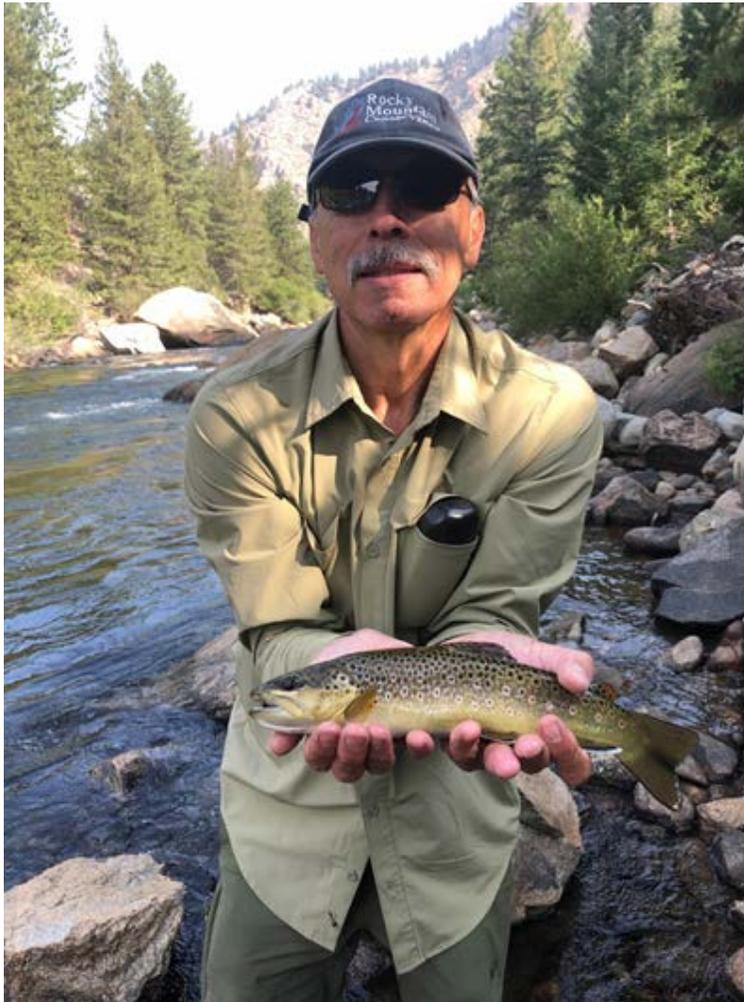
Here are two photos of the installation. One shows a basket tied to the buoy, and the second the buoy installed in the lake.



It's All About the Fishing

This is where we feature photos and stories from members. If you have a fish tale to tell, email it to newsletter editor Jim Fuquay at jimfuquay@gmail.com.

Magell Candelaria traveled to the upper Arkansas River near Buena Vista, Colo, in early August. "I have a former co-worker who now guides with Ark Anglers in Buena Vista, just south of Leadville. I did half-day wade fishing with Don Harville and caught some beautiful, fat browns." Magell also partook of wild raspberries along the river. "Always a joy to find wild berries," he said. The next day Magell floated through Brown's Canyon, about 15 miles south of town, for "another good day of fishing, mostly browns 11 to 12 inches but a few rainbows to 12 inches also." While wading was as productive as floating, "I would use Ark Anglers again and recommend them to anyone wanting to fish near the headwaters of the Arkansas where the water is less voluminous than downstream towards Salida and beyond." Magell wrapped up with a short foray wading into Big Thompson River in Estes Park, where he pulled in five trout in an hour on salmon eggs beneath an indicator.



Magell with a healthy brown from the Upper Arkansas River.



Wild raspberries along the river were a treat.

Even in August, FWFF outings director Chris Patnode reminds us that it's always great to get outdoors. Here he hoists a very nice largemouth he pulled from a local creek.



Chris Patnode with a local bass.

Fly of the Month: Feather Anatomy for Fly Tyers



*The birth of a fly begins with a feather. A Ziff Y8Sd e
5dWbaWbUfgdWfi*

Understanding the anatomy of feathers improves the fly tier's ability to make proper selection of feathers and feather parts ultimately leading to superior flies. Through this understanding the tier will know how to take advantage of the nature of the feather rather than trying to force it to do something that is unnatural

to it, which invariably leads to an inferior fly, in appearance and often function. Additionally, there is a widespread misuse of terms which frequently leads to misunderstanding of what is intended to be communicated.

The parts of a typical feather are simple to learn, and once understood help us to better appreciate why feathers do what they do in different applications. For example, a dry fly hackle when wound on an uneven surface (twisted thread, bulky surface, etc.) will skew barbs in various directions whereas the same feather mounted on an even surface will produce a fly with barbs at a distinct 90° angle from the surface it is mounted on. (For a graphic demonstration please refer to the video at <https://globalflyfisher.com/video/dry-fly-hackle-foundation>). Understanding the shape of the *rachis* and the location of the barbs on the *rachis* will help it all make sense. Through understanding of feather anatomy, the fly tier is the one in control.

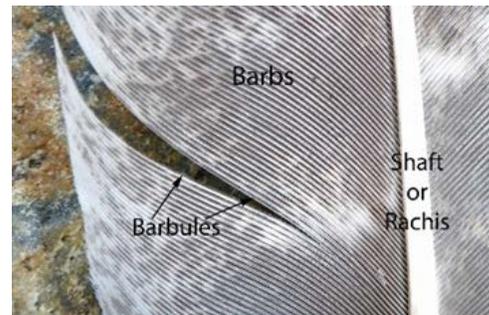
Feathers are as unique as the birds that wear them. The following discussion is general in its scope while being specific enough to cover most feather types that the fly tier will encounter. Great effort has been taken to accurately describe feathers and feather components. Perhaps just as important has been a desire to whet the appetite of the fly tier to better understand not only physical

construction, types and purposes of feathers, but also to become more curious about the nature of other materials, feathers and otherwise. Observation leads to understanding. Understanding leads to better results. It is better to investigate on your own than take for granted what has been said in the past.

While reading this article it may prove beneficial to have a selection of feathers on hand, such as an eyed peacock upper tail covert, a turkey tail feather, a turkey marabou semi-plume, a ring-necked pheasant contour feather and a rooster neck hackle.

Feather anatomy

The quill or *calamus* is often mistakenly described as being anything from the feather shaft to the barbs themselves. The fact is that the quill is simply that portion of the feather that is inserted in the skin follicle; nothing more. It is cylindrical, transparent, and hollow. There are no barbs attached to the quill.



The shaft or *rachis* is that portion of the feather that the barbs are attached to. It is flattened on the sides that support the barbs and differs from the quill by being r o u g h l y

rectangular in cross section. Internally it is not hollow, but rather is filled with a pithy material that contains air cells.

The barbs or *rami* (singular: *ramus*) come off the flattened sides of the shaft more toward the anterior (face) surface of the feather and in parallel rows, generally opposing one another. They point outward and toward the tip of the feather. They are somewhat

ovoid in cross-section (thinner side to side, wider front to back,) broader near their attachment to the *rachis*, flattening and narrowing as they approach the tip. Barbs, like the shaft, are filled with a pithy material containing air cells. A feather may have only a couple of dozen barbs or several hundred.



Barbules or *r a d i i* (singular: *r a d i u s*) extend out from either side of the barbs. From the base to

Fly of the Month: *Contd.*

about halfway to their tip, they are ribbon-like (the basal lamella). The distal half is more whip-like (the pennulum).



Goose secondary flight feather barbules showing ribbon-like basal lamella and whip-like pendulum

The barbules on the distal (upper) edge of a barb extend outward almost perpendicular to the barb. The barbules on the proximal (lower) edge of a barb lay more parallel with the barb.

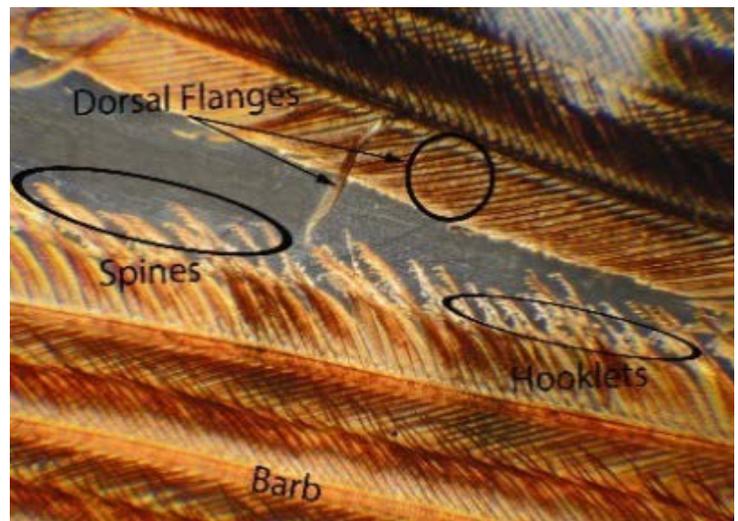


Upper edge of a lower barb on a goose secondary flight feather has barbules extending out nearly 90° while the lower edge barbules on the barb above are more in line with the barb (Photo: Verne Lehmborg)

This is readily visible with a peacock upper tail covert feather's barbs, commonly referred to as herl. (Herl according to dictionary definition is a barb or barbs of a feather, originating from the Middle English harle or herle which referred to fiber, hair of flax, or hemp). Barbules extend out from a barb more proximal to the anterior (face) surface like barbs on a shaft. Again, note the appearance of the peacock upper tail covert feather.

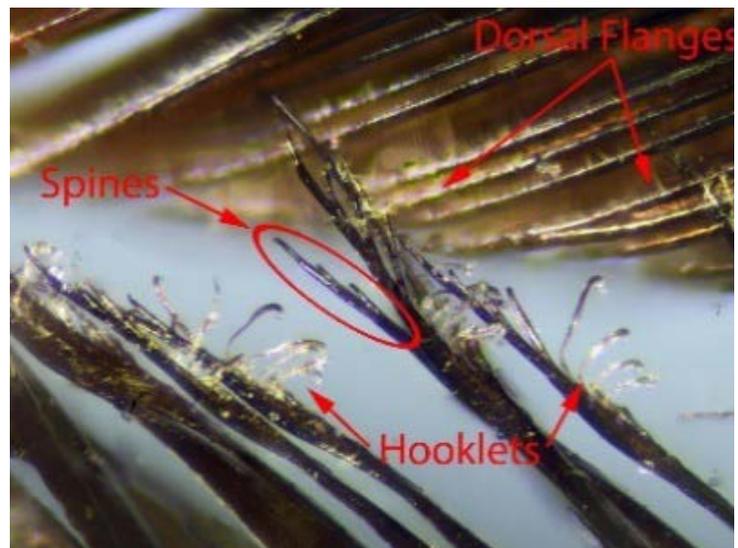
When viewed from the anterior surface of the feather, the brightly colored eye is more dominant because the barbules (which often provide most of a feather's color) are attached closer to the anterior edge of the barb. When viewed from the posterior surface, the flat, rather dull color is due to the dominance of the color of the edges of the barbs as well as the location and physical shape, and in turn, light reflectance of the barbules.

posterior surface, the flat, rather dull color is due to the dominance of the color of the edges of the barbs as well as the location and physical shape, and in turn, light reflectance of the barbules.



Argus pheasant secondary flight feather showing the three structures collectively referred to as barbicels (Photo: Verne Lehmborg)

Barbules may or may not have attached to them structures collectively referred to as barbicels. Barbicels allow adjacent barbules to interlock or marry. They differ on the barbule in shape and function by location. Distal barbules (those extending off the barb toward the feather tip) with barbicels have projecting structures at the base of the whip-like pennulum (distal half of the barbule) on the ventral (under) surface that are long and hooked, hooklets (*hamuli*), with the remainder of the pennulum having shorter spines (ventral processes).



The anatomy of a typical flight feather, in this example a Kori Bustard tertiary flight feather (Photo: Verne Lehmborg)

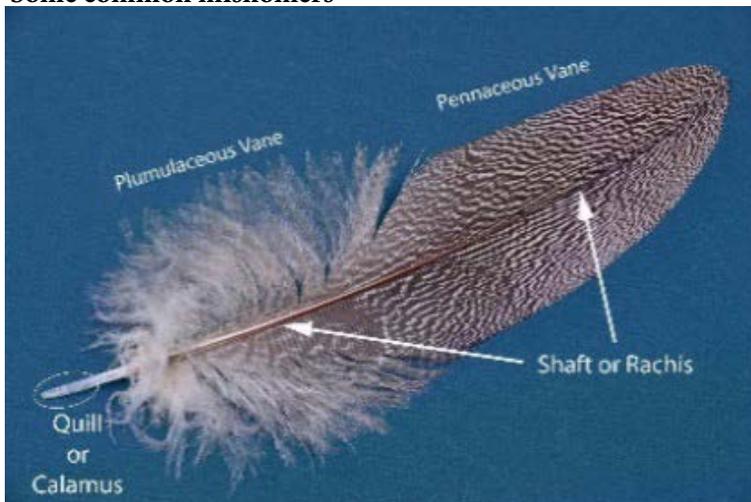
Proximal barbules (those extending off the barb toward the feather's quill) tend to be more twisted than the distal barbules and have a trough-shaped dorsal flange (groove) on the anterior

Fly of the Month: *Contd.*

(front) edge. As the hooklets of a distal barbule overlap the adjacent proximal barbule, the hooklets attach to the grooved edge while the spines stop the hooklets from sliding too far. The diagonal cross-over of barbules creates a visible herringbone pattern. Both distal and proximal barbules have other lesser processes on the underside of the ribbon-like *lamella* referred to as ventral teeth and on the upper side of the whip-like pennulum referred to as *dorsal cilium* or spines. The hooklets and spines create the marriage of the adjacent barbs while the dorsal processes and ventral teeth catch the barbs and barbules of overlaying feathers to help maintain a solid, air-tight surface in flight. In turn the feather vein is maintained as not only airtight, but with some birds, a watertight structure. Barbicels refers to all the processes that interlock to create the vein.

The shaft gives support while the vein (vexillum) or the web of a feather (which includes all the flat, expanded barbs, as well as any attached barbules, and barbicels) provides the surface for an airfoil in flight feathers and for covering and insulation in contour feathers. At the typical feather's base, the vein is downy and provides some insulation. This part of the vein is referred to as the plumulaceous vein. The remaining portion of the vein is firmer and compactly arranged and is referred to as the pennaceous vein. Feather types are often defined by the proportion of plumulaceous and pennaceous material present. Some feathers are strictly plumulaceous, others are strictly pennaceous, and others are both plumulaceous and pennaceous.

Some common misnomers



The same Argus pheasant secondary flight feather as above, but with greater magnification showing the location and appearance of spines and hooklets on the ventral barbs, and flanges on the dorsal barbs (Photo: Verne Lehmborg)

Birds have a tremendous variety of combinations of feather components. For instance, the Crowned Crane crest feathers are each made up of a short quill, a twisted rachis, and few barbs. What fly tiers consider the useable portion of a typical cock hackle for a dry fly has few or no barbules on the barbs with

the barbs with barbules being stripped off prior to application. Fly tiers somewhat incorrectly refer to this part of the feather as being the web or webby portion of the feather, while web is a term synonymous with the whole vein.

Some feathers have barbules without barbicels. Examples would include peacock upper tail covert feather barbs below the eye as well as down feathers from any bird.

When considering peacock herl, the barbs are often mistakenly referred to as quills and the barbules on the barb are confusingly referred to as herle. For example, the Quill Gordon fly pattern calls for a body made from a "quill" that before wrapping onto the hook, requires removal of the "herl."

This "quill" called for is actually a barb and the "herl" referred to are barbules on the herl or barb. Barbicels are found on flight feathers (turkey tail feathers, peacock secondary wing feathers, etc.) except for flightless birds (emu, ostrich, kiwi, etc.) Just as a barb does not necessarily have barbules, barbules do not necessarily have barbicels. Turkey marabou (semi-plume) is an example of a feather with barbules, but no barbicels. Body (contour) feathers of most pheasants are examples of feathers having barbules without barbicels (plumulaceous vein) on some barbs and barbules with barbicels (pennaceous vein) on others.

Why this is important to fly tying



Married barbs of turkey tail feathers viewed from the anterior surface or "face side" with lower barb's barbules overlapping the upper (Microphoto: Verne Lehmborg)

The arrangement of barbs, barbules, and barbicels is important to understand when marrying feather strips for a wing on a wet fly or Atlantic Salmon fly. The marriage of a strip of upper barbs to a correctly matching strip of lower barbs is quite easy if the face side of the upper strip is placed slightly behind the face side of the lower strip. This allows the hooklets on the barbules of the top barb of the lower strip to have opportunity to grasp the grooved edge (dorsal flange) of the barbules on the upper strip's bottom barb. If the strips are overlapped immediately above and below one another, or perhaps the upper strip is in front of the lower strip, due to their arrangement on the barbules, a complete

Fly of the Month: *Contd.*

interlocking of hooklets to flanges will not occur. If a strip is overlaid with another strip, but the matching strip is upside down, this arrangement of barbicels will not allow the strips to marry. If a right strip is overlaid with a left strip, even though the proximal to distal arrangement of the barbules is correct, no reliable marriage will occur because the hooklets and flanges do not align.

Many feathers develop fault bars across the vein. As feathers grow, a disruption in cell development may occur leaving distinct lines across the vein generally perpendicular to the shaft. These are due to stress, other abnormal conditions, or may be present under normal conditions. A fault bar's appearance is due to underdevelopment of barbules or total lack of barbules in the disruption.



Dyed white turkey tail feathers showing fault bars

Feather types

Each feather grows out of the dermal tissue from a follicle in similar fashion to hair in mammals. Some feathers can be moved by muscles attached to the follicles. For example, tail and wing feathers can be adjusted to aid in flight. Body feathers can be erected independently or in groups for the purpose of body temperature adjustment as well as for display. Most feather follicles are well supplied with nerves, so it appears that feathers may serve as organs of touch. During development, the feather is a living structure well supplied with blood, but once matured the feather itself is a dead structure. After a period of use it is shed or molted, and then replaced by a new feather from the same follicle.

There are two basic types of feathers from which others are derived: down feathers and vaned feathers. Down feathers are essentially random fluff having no barbicels on the barbules to interlock their barbs. In nestling birds down feathers consist of a tuft of barbs without a rachis. Juvenile and adult birds have down feathers that include a rachis. Vaned feathers include all feathers with a flat expanse of barbs extending parallel out from the shaft. Contour and flight feathers are pennaceous vaned feathers and are accepted as vaned feathers, where that plumulaceous feathers generally are not. Technically speaking, as discussed under Feather anatomy above, a marabou feather, though strictly a plumulaceous feather, is also a vaned feather. Down feathers, though plumulaceous, have a random arrangement of barbs, and thus would not be considered vein.

Other feather types, similar in some respects to down and vein feathers while unique in others, include filoplumes, bristles,

and semiplumes. A filoplume (thread feather) is a hair-like feather with barbs at the end of the shaft. They are distributed to all feather types, are always intimate to other feathers (from one to twelve adjacent on a feather,) but grow out of their own follicles. Their purpose seems to have to do with subtle detection of movement of the adjacent feather such that they may, for example, aid in adjustment of feathers when in flight.

(Filoplumes are sometimes incorrectly referred to as pinfeathers. A pinfeather is any feather that is immature). Virtually all bristles are found on bird's heads. They are stiff with a tapered shaft having barbs only on the proximal portion of the shaft (i.e., crown crane crest feathers). Often, they are mistaken for filoplumes which differ by having barbs at the distal end of the shaft. A semiplume is a down-like (plumulaceous) feather having a rachis, barbs, and barbules, but no barbicels (e.g., marabou). Of these only the latter is of common use in fly tying.

Feather names

Numerous specialized names are applied to feathers appropriate to their location on the bird, from the face to the toes, but there are just a few basic types that would likely concern most fly tying needs.

Contour feathers cover the bird's body. They are close fitting yet separated from the skin to help isolate the body from outside humidity and temperature. With the assistance of follicle muscles, the contour feathers can be erected, then lowered to adjust the depth of the protective layer. Contour feathers are typically broad, thin, curving inward toward the skin, directed toward the tail in overlapping rows, and have a combined pennaceous/plumulaceous vein.



Ring-necked pheasant contour feathers showing afterfeathers/aftershafts.

They help to smooth and streamline the body for flight. In some species they may be greatly modified for purposes of display or some other ornamental purpose. Many contour feathers have afterfeathers (or aftershafts) attached at the base. These are small plumulaceous feathers which may or may not have a shaft (*hyporachis*). Usually, a contour feather's afterfeather is no more than half the length of the attached contour feather, yet

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exceptions always seem to occur in nature. Two birds, the Emu and the Cassowary, have afterfeathers as long as their contour feathers, while some birds such as the pigeon and ostrich have no afterfeathers. Flight feathers include the tail feathers (*rectrices*) and wing feathers (*remiges*) as well as supplemental feathers that cover the adjacent upper and under surfaces.

The tail feathers (*rectrices*) act as a stabilizer tilting the front of the body up and down, as well as an air brake when the bird lands, but they are not used for steering except in steep turns. Tail feathers are generally large, stiff in texture, asymmetric, have veins that are almost entirely pennaceous, and lack afterfeathers. In most cases tail assemblies are made up of 10-12 feathers (with some pheasants having up to 24) arranged in a single horizontal row. They each overlap their lateral (outside) edge over the medial (inside) edge of the adjacent feather. The outermost feather's lateral vein is narrow, stiff, and convex compared to the softer, longer, concave barbs of the inner vein. This effect is digressive as the feathers work toward the center pair, such that the center pair's vein is symmetric right to left. The turkey tail assembly when fanned clearly demonstrates this. At the bases of the tail feathers are upper tail and under tail covert feathers that smooth and streamline the tail of the bird. Exceptions do occur such as with the peacock upper tail coverts, which lack streamlining but are useful for display.

The wing feathers (*remiges*) are used for steering. Like tail feathers, they are generally large, stiff in texture, asymmetric, have veins that are almost entirely pennaceous, and lack afterfeathers. Wing feathers include primary, secondary, and tertiary feathers. The primary wing feathers (typically 10-11 in number) attach to the middle digit and the hand. They are asymmetrical in vane structure with their leading and trailing margins notched. This sudden narrowing produces a series of slotted spaces between the primaries which in flight reduces air turbulence over the wing tips. Where turbulence is most extreme, the leading-edge barbs are broadened and stiffened. These barbs are referred to in fly tying parlance as biots. The secondary wing feathers (anywhere from 9 to 40 in number and up to six inches wide by six feet in length) attach to the ulna of the forearm. The tertiary wing feathers attach to the humerus. There may also be a group of 3 or 4 feathers attached to the bones of the thumb forming a bastard wing (*alula*). These feathers lie flat during normal flight but extend out when flying slowly to prevent stalling.

Wing feathers may be uniquely developed for specific purposes. For example, waterfowl wing feathers are designed to be water repellent. This is accomplished by modifications in the structure and position of the barbules such that a surface through which water cannot enter is created. They are so unique that a specific name is applied to this type of barbule/barbicel structure; flexules. The owl differs dramatically in having soft overlays of barbules on the surface of the feathers that allow this bird to be silent in flight.

The bases of the wing feathers as well as the upper and lower surface of the remainder of the wing are covered by several rows of small, flattened wing coverts (*teatrices*). The largest wing coverts are adjacent the wing feathers and digress in size toward the wings leading edge. The vein is principally pennaceous and designed to supply an air-tight surface to the wing. The upper wing coverts, like contour feathers, are convex. Underwing coverts are concave, which fits them up into the underside curve of the wing. (This is an important consideration for the fly tier. For example, in Frederic Tolfrey's *Jones's Guide to Norway*, a component of the wing on "The Major" salmon fly dressing calls for an overlay of two snipe feathers. These are underwing coverts on the snipe, and thus are concave. Their natural concavity forces the fly tier to carefully select a pair that will produce little or no outward curve when placed over the wing.) The underwing coverts on the leading edge of the wing initially extend vertically and then bend backward over the wing at an acute right angle creating a camber or upward curve.

Plumage development stages

A bird passes through various distinct stages of plumage. The plumage of the nestling stage is mostly down and contour feathers which plays a role primarily of warmth and concealment. There may also be an intermediate nestling stage with yet a different plumage. The adult may have different stages of plumage such as immature, full adult, prenuptial, and courtship. Male to female can be quite different, especially in the adult. Some immature birds take on the appearance of a mature female (i.e., some cockatoos and parrots). For the fly tier this can be of importance since some feathers in a fly may be obtained only from an adult male, an adult female, an immature male and/or female, either the adult female or an immature bird, or perhaps any of these.

For example, in *The Salmon Fly*, George Kelson's dressings for The Silver Spectre and Prince's Mixture call for the use of Black Cockatoo's tail. Experience teaches that the feather of choice is only found on female or immature male Red-Tailed Black Cockatoo mottled orange, black and yellow center tails. A mature male has completely different black-red-black center tails. Then in Francis Francis' *A Book on Angling*, another dressing may simply read Black Cockatoo or any other black feather. Here the feather becomes more obvious and might be either a strip from the black portion of an adult male Red-Tailed Black Cockatoo's tail, or better yet the all black tail of an adult male Palm Cockatoo.

Summation

The more the fly tier knows about the materials he has access to, the better his ability to select and apply the proper material to achieve the desired result. Do not always accept what is read or told without a bit of personal investigation. Take time to look at materials. Feel them. Observe them under magnification. If possible, gain access to a good hand lens of at least 15x, or better yet a dissecting microscope. Close observation of the structure of the materials we tie with can prove amazingly enlightening. Do some homework in books such as Darrel Martin's *Fly Tying*

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Methods, which includes excellent microphotographs of all manner of tying materials. Thorough knowledge of materials, dexterity, and experience are always found in abundance with the best fly tiers.

For a visual demonstration of some of the structures previously described, refer to the following two videos: <https://globalflyfisher.com/video/feather-anatomy-part-1> and <https://globalflyfisher.com/video/feather-anatomy-part-2>

Definitions

Afterfeather/aftershaft – attached at the base of contour feathers; small plumulaceous feathers which may or may not have a shaft.

Barbicel – a collective term referring to all the processes found on the barbule that interlock to create the vein.

Barbs – *sing. ramus, pl. rami*; fibers that extend off the flattened sides of the shaft in parallel rows generally opposing one another; somewhat ovoid in cross-section; filled with a pithy material containing air cells.

Barbules – *sing. radius, pl. radii*; extend out from either side of the barbs; each is ribbon-like from the base to about halfway to the tip and whip-like over the distal half.

Basal Lamella – ribbon-like base of the barbule; ventral teeth are attached to the under surface.

Bastard Wing – *sing. alula*; feathers that lie flat during normal flight but extend out when flying slowly to prevent stalling.

Bristles – generally found on bird's heads; stiff with a tapered shaft having barbs only on the proximal portion of the shaft.

Contour Feathers – cover the bird's body; typically broad, thin, curving inward toward the skin, and directed toward the tail in overlapping rows; help to smooth and streamline the body for flight.

Dorsal Flanges – trough-shaped proximal barbules that are more twisted than the distal barbules; hooklets overlap and attach to the flanges.

Flight Feathers – include the tail feathers and wing feathers as well as supplemental feathers that cover the adjacent upper and under surfaces.

Filoplume – synonymous with thread feather; hair-like feather with barbs at the end of the shaft, always intimate to other feathers (from one to twelve adjacent a feather,) but grow out of their own follicles.

Hooklets – *pl. hamuli*; hooked barbicel structures on the distal barbules that overlap and attach to opposing dorsal flanges.

Pennaceous – referring to barbs having barbules with barbicels that interlock adjacent barbs.

Pennulum – whip-like tip of the barbule; hooklets are attached to the proximal, ventral portion with the dorsal spines and dorsal cilium attached to the remainder of the pennulum.

Pinfeather – any feather that is immature.

Plumulaceous – referring to downy like barbs having barbules without barbicels.

Primary Wing Feathers – typically 10-11 in number; attach to the middle digit and the hand; asymmetrical in vein structure

with their leading and trailing margins notched.

Quill – *sing. calamus*; that portion of the feather that is inserted in the skin follicle. It is cylindrical, transparent, and hollow having no barbs attached.

Secondary Wing Feathers – from 9 to 40 in number; attach to the ulna of the forearm.

Semiplume – a plumulaceous vein feather (i.e., marabou).

Shaft – *sing. rachis*; that portion of the feather that the barbs are attached to; flattened on the sides that support the barbs; roughly rectangular in cross section; filled with a pithy material that contains air cells.

Spines – ventral processes on the distal barbules that stop the hooklets from sliding too far and collapsing the vein.

Tail Feathers – *pl. rectrices*; large, stiff in texture, asymmetric, have veins that are almost entirely pennaceous, and lack afterfeathers; act as a stabilizer tilting the front of the body up and down, as well as an air brake.

Tertiary Wing Feathers – attach to the humerus.

Upper and Under Tail Covert Feathers – smooth and streamline the tail of the bird.

Vein – *sing. vexillum*; the web of a feather which includes all the flat, expanded barbs, as well as any attached barbules, and barbicels which provide the surface for an airfoil in flight feathers and for covering and insulation in contour feathers.

Vaned Feathers – a collective term generally referring to a feather that has at least some interlocked barbs as seen in contour, wing, and tail feathers on birds that can fly.

Web – synonymous with vein.

Wing Coverts – *pl. tectrices*; cover the upper and lower wing surfaces and the bases of the wing feathers.

Wing Feathers – *pl. remiges*; generally large, stiff in texture, asymmetric, have veins that are almost entirely pennaceous, and lack afterfeathers; used for steering.

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CLUB ACTIVITIES

2021 OUTINGS CALENDAR			
DATE	LOCATION	SPECIES	HOST
Sept. 24th-26th	Bill Ward Ranch near Mexia, Texas	Bass and panfish	Bill Hodges
Oct. 15-17, 2021	Oktoberfisch - Edgewater Resort Complex on the Pedernales River	Bass	Fredericksburg Fly Fishers
Nov. 19-21, 2021	Lower Illinois River near Gore, Oklahoma	Trout, bass, catfish, dru	Chris Patnode

Fly Tying Groups Around Town

One of the best ways to improve and learn new tying skills as well as make new friends is to attend one of the tying events held in our area on a weekly basis. If you are a seasoned and experienced tyer, many of us would be glad to learn a new pattern or technique from you. If you are new to the whole mystifying ordeal of putting thread and feathers on a hook, do not be intimidated. Come and watch, enjoy a cold one, and catch up on recent fishing reports.



Fort Worth

Backwoods:
441 Carroll Street
Montgomery Plaza
Fort Worth, TX
817-332-2423

Every other Thursday at 6:30 p.m. (Sept. 9 and 23.)

Call ahead for details and information.

Backwoods fly tying nights are well attended with lots of knowledgeable tyers that are willing to help and share.

Arlington

El Fenix Mexican Restaurant
4608 S Cooper St.
Arlington TX 76017
817-557-4309

Thursday nights: Dinner and drinks start at 5:15-5:30 p.m.

Tying starts at 6:30 p.m.

This event is usually headed by FWFF members who rotate in leading the class, which meets in a space in the rear of the restaurant. Mexican cuisine and cold drinks get the program rolling before tyers start making the fur, feathers and lies fly. If you don't mind a bit of rabbit fur in your salsa or peacock herl in your PBR, come join us!

Roadkill Roundtable via ZOOM

The Roadkill Roundtable will continue its online fly tying demonstrations this fall. The ZOOM calls will be hosted by Jack Gillis, our fly tying chairman. The tying demonstrations will include several experienced and well-known fly tyers, including Dutch Baughman, Fred DuPre', Dave Boyer, Eric Austin, Al and Gretchen Beatty. If you are an experienced tyer, or just beginning your fly tying journey, you will not want to miss these excellent demonstrations. All meetings will be held on ZOOM and will be at 7 p.m. on the following Tuesdays: Sept. 14 and 28, Oct. 12 and 26, Nov. 9 and 23, and Dec. 14. To be included on the email invitations, please email JackGillis@Outlook.com.

FORT WORTH FLY FISHERS Board of Directors

<u>Position</u>	<u>Board Member</u>	<u>Term</u>
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Our Purpose

"The purpose of our local club is to provide a forum for the meeting and exchange of ideas among members concerning the art of fly fishing."
*Federation of Fly Fishers, Southern Council 2002 and 2003 Club of the Year,
 Texas Council 2014 Club of the Year*