

# N.J.B.A. Newsletter

NJBA Volume 21, Issue 3

15 Feb. 2018

## Upcoming Events

Many of our meets feature an "Iron in the Hat" drawing (fund raiser), so be sure to bring a contribution. Tailgate sales are permitted at many of our events. Look for more details on later pages. See p. 2 for Directors' contact information.

### **Sat., Mar. 17., Damascus Workshop**

Similar to previous such workshops. \$150 fee + \$35 materials fee. See announcements, below.

**Sat., April 21., Knifemaking Workshop** Similar to previous such workshops. See "Knifemaking and Damascus Workshops" announcements, below.

### **Sun., May 20, Walnford Day**

NJBA will demonstrate blacksmithing to the public. Members are welcome to participate. Contact NJBA Director Bruce Freeman for info.

### **Sat., May 26. Advanced Damascus Workshop**

More advanced than previous Damascus workshops. See "Knifemaking and Damascus Workshops" announcements, below.

### **Sat., June 9. Anvil-Repair Workshop**

Registration fee (\$50) due by April 15. See detailed announcement, below.

### **Sat., July 7. Princeton U. Open Forge Meet**

Princeton U. will be hosting a summer open-forge meet for students. Volunteers are solicited to help. Contact NJBA Director Ryan Amos if you would like to assist.

### **Mon.-Sun., Aug. 6-12. Middlesex Co. Fair**

NJBA has been invited back to the fair. Volunteers will be needed to help man our forges from 5-9 PM all seven days. Contact NJBA Director Bruce Freeman if you'd like to participate.

### **August 19, Red Mill Picnic and Tailgate Sale.**

Mark your calendar.

## Knifemaking and Damascus Workshops

Each of these three workshops (See "Upcoming Events") is limited to 6 participants. The fee for each is \$150 (plus your \$20 membership dues payable at workshop, if you haven't already paid). A \$35-\$50 material fee (depending upon the workshop) is due when registering & reserving your place in the workshop. Contact NJBA Director Mark Morrow for further information. and to register. (**Note:** Text Mark if you can't reach him otherwise.) Tailgate sales welcome.

*Note: Tasks performed at these workshops are limited to the projects being taught and no other. If you have other tasks, please bring them to our Monday open forge meet in Howell.*

## Anvil-repair Workshop

NJBA will be holding another participatory anvil-repair workshops on Saturday, June 9, 2018. The price per anvil will be \$150 for ordinary repairs on edges, faces, and hardy hole, but additional charges may be assessed, depending upon the size and condition of the anvil. A registration fee of \$50 per anvil is due by April 15.

Participants will be expected to assist with the work involved. Participants should expect to have to grind the excess weld bead on their anvils themselves. Instruction in these tasks will be available.

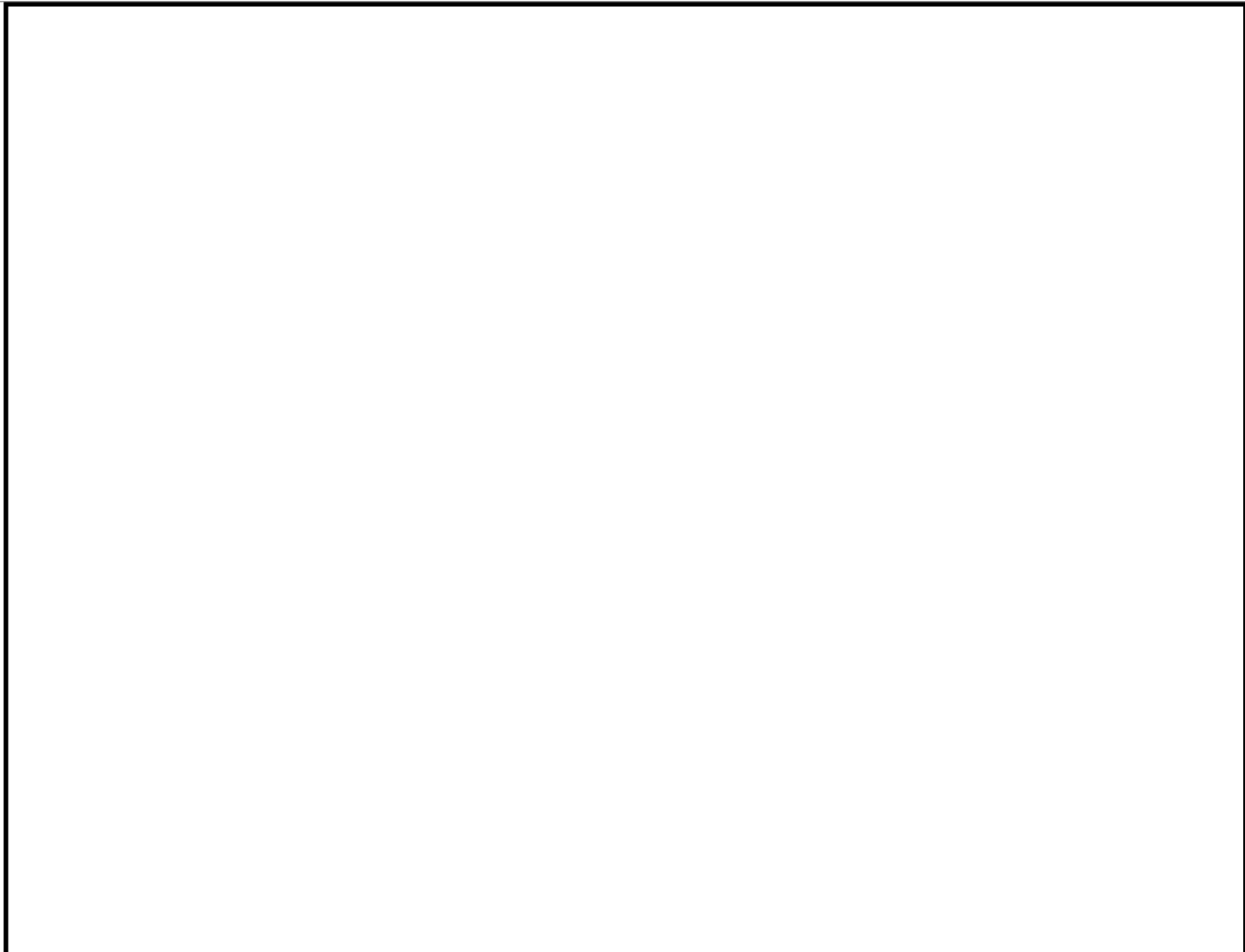
Contact NJBA Director Al Mottram if you are interested. Please provide high resolution photos of your anvil edges, top, each side and bottom so we can estimate your repair costs.

Assistance from nonparticipating members is also welcomed. *Come see how we fix anvils!*

Tailgate sales welcome.

# New Jersey Blacksmiths Newsletter

## NJBA Board of Directors



We like to thank those who joined NJBA as  
Business Members:

**Marshall Bienstock      Eric Cuper**

### **East Jersey Olde Towne ...**

... still needs blacksmith demonstrators. Contact Matthew Stroh at EJOT 732.745.3030 Ext 304. More info. at <http://www.middlesexcountynj.gov/Government/Departments/BDE/Pages/East-Jersey-Olde-Towne-Village.aspx> or from Bob Bozzay ([robert.bozzay@gmail.com](mailto:robert.bozzay@gmail.com)) ([robert.bozzay@gmail.com](mailto:robert.bozzay@gmail.com)).

### **ABANA CONFERENCES -- 2008 & 2010**

**Wed., Jun 27 – Sat., 30 Jun, 2018.** ABANA 2018 Conference Meadow Event Park Richmond, Virginia. Visit [ABANA.org](http://ABANA.org) for further information.

**Summer, 2020.** ABANA 2020 Conference. To be held near Saratoga Springs, NY. At this past Ashokan meet, Bruce volunteered the loan of our lightweight forges. For information or to volunteer for this event, contact Rand Condell at the Adirondack Folk School, 518-696-2400, P.O. Box 2, Lake Luzerne, NY 12846

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## Official NJBA Address

NJBA, P.O. Box 224

Farmingdale, NJ 07727-9998

## **NJBA's Website:**

<http://www.njblacksmiths.org>

## **NJBA's Facebook Page:**

<https://www.facebook.com/njblacksmiths/>

## **NJBA's Private Yahoo Group...**

Send an email to [crankybellows@gmail.com](mailto:crankybellows@gmail.com), including your name e-mail address, and an invitation will be sent to you.

## **NJBA's IForgeIron subforum:**

Scroll down at

<https://www.iforgeiron.com/>.

## **NJBA Newsletter:**

[njblacksmiths.org/archive/index.htm](http://njblacksmiths.org/archive/index.htm)

or use the link on the NJBA web site for the newsletter.

## **Open Forge Meets**

Anyone 18 years or older is welcome to try their hand one time at our open forge meets. NJBA members may participate any time the forge is open. (The application form is on the last page of this newsletter.)

### **Monday Night Open Forge, Howell, NJ**

NJBA Director Marshall Bienstock hosts an open forge meet every Monday evening at 7 PM, except major holidays. (Please call ahead on holidays to make sure the forge will be open.)

### **Sunday Open Forge, Smithtown, LI, NY**

**From the beginning of November through the end of April**, Ron Grabowski will open his forge in Smithtown, LI, NY, to NJBA members. Please call ahead to confirm and get directions: 631-265-1564. Ronsforge@aol.com

## **New NJBA T-Shirts Now Available**

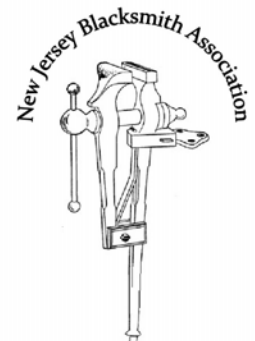
We have recently received our new NJBA T-shirts. These navy blue heavy-duty pocket T's bear the anvil logo (below left) on the pocket and the vise logo (below right) on the back.

Prices are \$20 for sizes M, L & XL, or \$25 for sizes 2XL & 3XL.

NJBA Sweatshirts are still available at \$25 each for all sizes.

These T-shirts and sweatshirts may be purchased at our Monday evening open forge meet at Marshall's Farm, and we expect to have them available as well at our upcoming workshops and meets.

For further information, contact NJBA Directors Bruce Freeman or Marshall Bienstock.



## **Report on the NJBA Holiday Party**

Jan and Marshall hosted yet another Holiday Party on Dec. 3, at their home in Farmingdale. We had a small but congenial crowd, and the pot luck dinner was very satisfactory.

## **Participation in Hands-On Events**

Participation in NJBA-sponsored hands-on events is limited to adults (i.e., 18 years or older).

This rule was effected as of December 2016, when NJBA was having problems with its insurance coverage (which has since replaced).

This policy applies to workshops, open forge meets, demonstrations, etc.

This policy *does not* apply to open forge meets and similar events that are sponsored by youth-oriented organizations such as scouts or schools with the aid of NJBA equipment and members.

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## **Highlights of the February Board Meeting**

NJBA Directors Al Mottram, Damian Toryak, Marshall Bienstock, Ryan Amos, Bruce Freeman, and Larry Brown, and NJBA member Dan Lapidow were in attendance.

Coal. We'll need a warmish day to rebag some coal we have.

T-shirts. The new T-shirts have been received and are on sale at Monday evening open forge meetings and other events. (See p. 3.)

Sweatshirts are available for \$25 each.

"Shed" for the NJBA Equipment. Marshall has donated a 40' storage container on his back lot. Half of this container will be NJBA's to use; the remaining half will be for Marshall's use. We had 20 tons of crushed concrete, and Marshall leveled it for a pad. Marshall, Al and Bruce have repaired or replaced the floor joists, moved the container onto the pad, and cleaned it out. The remaining tasks include: Jack up the center of the roof to bow the roof upwards for drainage, and install roof supports. Divide container by some means to Marshall's half and NJBA's half. Repair the roof. Install wood or hardware on the walls for supporting stored equipment.

Crane Rail Anvils. Former Director Dan O'Sullivan has donated several pieces of heavy rail for anvil-making. Marshall and Larry agreed to rough-cut these into anvils, on some day with enough daylight. The sales price of the rough-cut rail anvils remains to be determined.

Newsletter. There was some discussion of whether we should continue printing the Newsletter, or should instead send it by email. After some discussion, it was decided not to change current procedures, which involve mailing the Newsletter and also posting it on our website.

Princeton Open Forge. NJBA will hold an open forge meet for Princeton U. summer students Sat., July 7. NJBA members interested in assisting

## **Volunteers Needed**

Recently we've had to solicit volunteers for a number of events, including demonstrators for Walnford Day, the Middlesex Co. Fair, Waterloo Village, and our Red Mill Picnic, as well as volunteers to man coal fires and provide coaching to novices at open forge meets.

If you put yourself on this list, you will likely be contacted sometime this season about volunteering. (See the last page of this newsletter.)

Please contact NJBA Director Bruce Freeman by email or snail mail.

should contact NJBA Director Ryan Amos.

Picnic & Open Forge in Howell. NJBA will hold Picnic & Open Forge Meet at Marshall's farm on a yet-undetermined Saturday in September, and preferably listing a rain date in the announcement.

Anvil-Repair Workshop. The Board will require a minimum of six anvils for this workshop to run, with a maximum of maybe ten or twelve, and set a registration fee (refundable if the workshop is cancelled) of \$50 -- 1/3rd of the workshop fee -- due by April 15 (for the June 9 workshop).

Other Business. Eric Cuper, who participated most recently at the MAST open forge meet, rejoined NJBA as a business membership and was elected to the Board by the Board.

Ryan reports progress with his Princeton U. Blacksmithing Club.

Next Board Meeting. The next Board meeting was set for April 30, 2018, at 7:30 PM in Marshall's shop. NJBA members are welcome to attend.

NJBA dues are payable in June, 2018,  
and cover July 2018 - June, 2019.  
Check the address label on your  
Newsletter envelope to see when  
yours are next due.

## Controlled Hand Forging Lesson 20

### Forging a Fishtail

Text and photos by Dan Nauman

Drawings by Tom Latané

Lesson #20.

**Unit: Forging a Fishtail**

**Definition:** Drawing down is the reduction of the cross-sectional area of a bar.

**Intent:** To continue learning aspects of using the cross peen accurately for controlled tapering and even spreading.

**Tools:** Basic forging tools.

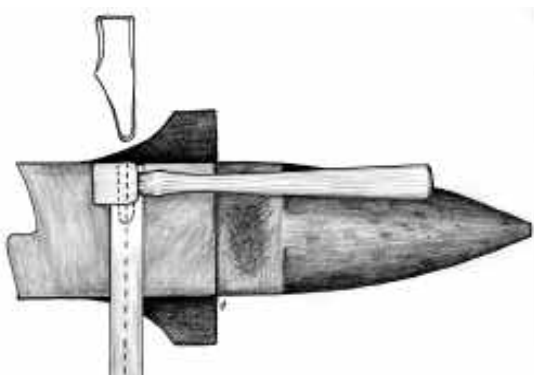
**Material:** 1/4" x 1" x 18".

**Note:** You may wish to review Lesson #19 which explains how the cross peen should be dressed, basic cross-peen forging, and cross-peen forging dynamics.

#### Step One

Heat 3" of the end of the bar to a full yellow heat, then lay the bar flat on the anvil with the end of the bar 1/8" in from the far edge of the anvil. You should be standing with your hammer arm's shoulder next to the anvil, and your body perpendicular to the anvil.

With the peen pitched down about ten degrees towards the end of the bar, and with the peen parallel to the length of the bar, begin striking the middle of the bar. (See image #1.)



1. With the bar held perpendicular to the anvil and its end even with the far edge of the face, the first blows of the peen land in the center of the bar.

The reason the peen is pitched is to begin forming the taper. The bar is near the edge of the anvil to reduce the chance of an errant blow damaging the face of the anvil. (See image #2.)



2a. The hammer head is tilted so the peen strikes the bar at the angle of the desired taper.



2b. Because the bar is held even with the far edge of the anvil, the corner of the hammer peen should never come in contact with the face of the anvil even if the blow lands a little wide of the mark. Working at a slightly rounded edge will prevent damage to the squarest edge of the anvil, should the bar slip back from the edge.

When the middle of the end of the bar has been reduced to 1/16" in thickness, slowly begin working the peen back into the bar, taking overlapping blows and creating a trough down the middle of the bar. Continue to work

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back into the bar with the peen pitched. As you work back, begin to lighten your blows so that the trough feathers out to the full thickness of the bar. The trough should end about 2 1/2" from the end of the bar. (See image #3.)

## Step Two

Heat 4" of the bar to a full yellow heat, being careful not to burn the thinned middle section of the bar. You can tilt the bar on edge to keep the thin middle section out of the direct blast of the fire. Place the bar on the anvil as in Step 1. Continue peening the bar, starting from the middle of the bar, then gradually moving out to the far edge. As the middle is already thinner from step 1, be careful not to get the middle of the bar any thinner than 1/16". Always maintain the peen parallel to the length of the bar. Move the peen in small increments, overlapping the track of each previous blow. Continue until you reach the corner.



3. Centered trough formed by cross peen, 2 1/2" long.

It is interesting to note that the length of the bar doesn't change dramatically in this process, because the shape of the peen is primarily forcing the metal to change the bar's width. Correctly executed, you will develop a corner as seen in image #4.

## Step 3

Heat 4" of the bar to a full yellow heat (remember to tilt the thin side away from the



4. After Step 2, the far corner should look like this.



5. Both corners have been peened out in this photo. This is what the fishtail should look like before refining with the face of the hammer.

fire blast), placing the bar on the anvil as you did in prior steps. This time begin striking the bar again in the middle, but now gradually work the peen towards the near edge of the bar, maintaining the peen parallel to the length of the bar. Again, move the peen in small increments, overlapping the track of the previous blow. Continue until you reach the corner. Do not get frustrated if the shape in this step starts out somewhat lopsided, as this is actually how

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the shape should look at this point, and through controlled blows, will begin to blossom into a fine and symmetric fishtail shape. (See image 5.)

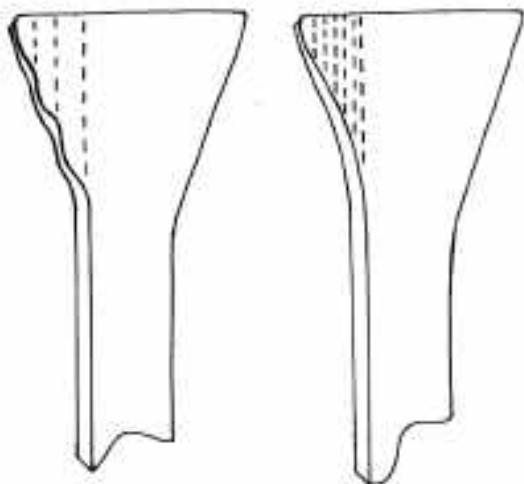
Note that the end of the bar remains fairly straight and perpendicular to the sides of the bar when properly executed. Though you should strive for this feature, do not get overly concerned if the end is not perfectly straight and perpendicular, as refining it will come later in Step 5.

As you get more experienced, you may choose to perform this step in the same heat along with Step 2.

If you encounter shapes as seen in images 6 and 7, you can work the area lightly with the cross peen to fill in the gaps in image 6, or to straighten the edges of image 7.

## Step 4

Heat the entire fishtail to a full yellow heat. With the face of the hammer, smooth out the cross-peen marks, maintaining an even lengthwise taper.



6. A wavy-edged flare results when the blows of the peen are too far apart. Narrow portions of the edge are thick portions of the taper. Direct blows at these spots

## Step 5

In this step we are going to refine the fishtail, by making the rounded corners of the fishtail more crisp and sharp, and refining the end and sides to straight lines. We will use the hammer's face to do the work.

Take a medium orange heat on the entire fishtail. Lay the bar across the anvil with the fishtail extending two inches beyond the far edge. Holding the cool end of the bar tightly against your thigh to help absorb shock, direct rapid light blows upon the end of the fishtail, driving the material toward yourself. If the fishtail buckles during this upsetting process, move the fishtail to the anvil surface to flatten. There may need to be several alternate rounds of upsetting and flattening blows before the end of the bar is straight and perpendicular to the centerline of the bar, along with a consistent lengthwise taper.



7. This is the position of the fishtail on the anvil to refine the shape. Refine at a low heat to reduce buckling.

Take another medium orange heat. Lay the bar on edge, with the beginning of the fishtail at a rounded portion of the near edge of the anvil, making sure the straight portion of the bar is off the anvil (See image 7.) Lightly hit the side of the fishtail to sharpen the corners. You will note that the corner you hit with the hammer sharpens faster than the corner on the anvil. Alternate sides so the corners

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sharpen evenly. If the fishtail begins to fold, stop hitting the edge, and flatten the fishtail back down with taps just hard enough to flatten, but not to squeeze the metal, which would further thin your work.

You may need to repeat this step, and take several heats to accomplish the desired shape (See image 8.)

**Note:** You do not want to get the metal any hotter than medium orange, as the material needs to be stiff enough to support the refining blows without folding over readily. This is one of the few times when cooler material is better.



8. The refined fishtail shape. Note that the centerline of the parent bar is centered also in the fishtail.

## **Forging dynamics:**

Image #9 shows the finished fishtail shape (left) that was made by the cross peen. The forging on the right, made by only the hammer face, has the same taper and end thickness, but not the same width as the forging on the left. Because the hammer face spreads material in all directions, for this exercise, it cannot forge the material as wide as the cross peen.

## **Targets**

- Try to perform Steps 1-3 in one or two heats.
- The length of the fishtail should be 2 1/2" .
- The width of the end of the fishtail should be between 2 3/16" and 2 3/8" .
- The flared sides of the fishtail should be straight, and the end should be perpendicular to the length of the bar.



9. The forging on the right was made using only the hammer's face. It has the same taper and end thickness as this lesson's forging on the left, but could not achieve the desired width without sacrificing the other two dimensions

- The centerline of the fishtail and the parent bar should be the same.
- The fishtail should have a slow and even taper in its lengthwise cross-section.
- There should be no cross-peen marks in the bar

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