Newsletter

Volume 1, No. 3

October 1996

Welding and Anvil Restoration at November Membership Meeting

Sunday, November 17 beginning at 12:00 noon. Basic Gas & Arc Welding Techniques (none of that sissy forge welding stuff) at the forge of Marshall Bienstock, 663 Casino Drive, Howell, NJ (908) 780-0871. (See Calendar section for directions.) Basic gas & arc welding techniques will be demonstrated, with opportunities for those interested to learn &

use several types of welding equipment. Materials, tools & equipment will be provided, but if you have access to any welding glasses or helmets, please bring as supplies are short. In addition, a demonstration of advanced welding will be performed, specifically restoring an old anvil to operating condition by buildup of new welded corners and face as required.

Nonmembers are welcome, but we do request a \$5.00 donation to help us defray expenses.

An Iron in the Hat (see below) will be held at each of the meetings (contributions are always encouraged).

For additional information or directions, contact Marshall Bienstock:

(908) 780-0871 days, or (908) 938-6577 eves, email: mbienstock@worldnet.att.net; or contact Pete Engle: (908) 219-6560, email: pgengle@aol.com.

Christmas Specialties at December Membership Meeting

Saturday, December 14 beginning at 10:00 AM (doors open at 9:00). Christmas Greetings: A mini hammer-in will be held at Historic Allaire Village in Howell, NJ (located in Allaire State Park). Six or seven forges will be in operation. Subject is demonstration & fabrication of attendees' favorite holiday gifts. Bring your favorite gift ideas & be prepared to demonstrate. We will have revolving demos & hands-on work at each of the forges. If there are any special materials or tooling required, bring them.

Nonmembers are welcome, but we do request a \$5.00 donation to help us defray expenses.

An Iron in the Hat (see below) will be held at each of the meetings (contributions are always encouraged).

For additional information or directions, contact any of the directors.

Iron in the Hat

An Iron in the Hat will be held as a fund raiser for the NJBA at each of our member meetings. An Iron in the Hat is a raffle of

member's ironwork, or any other items of interest to our membership (books, tools, T-shirts, hats, etc.). Members are encouraged to donate any appropriate items that they feel they can part with. Tickets will be sold and drawings made

somewhat flexible, with the Directors reserving the right to change format, items offered, etc. at will. This is always a good opportunity for people to show off their work, the places they've been, etc. and benefit the chapter as well. Please donate early and often.

A Reminder to Founding Members-Please Upgrade your Membership

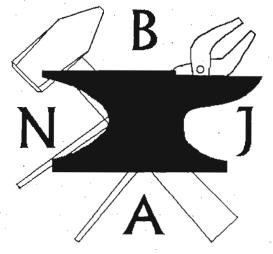
If you were one of the dozen persons privileged to have participated in the foundational meeting of NJBA at Allaire

Village on May, 19, you are for all time a "NJBA Founder," However you are no longer be a "member in good standing" unless you have paid your additional \$10 dues allotment for 1996.

You may recall that at that meeting you were asked to "Contribute \$5, applicable to the first year's membership dues." [quoting the NJBA Bylaws, boldface italics added]. Since \$5 per member would scarcely cover postage costs for the NJBA, the board brought the NJBA annual dues in line with those of other ABANA chapters: \$15. Members

were informed of the additional assessment in the first newsletter.

Since founders paid \$5, they have not been dropped from the membership. Instead, their membership has been downgraded to a newsletter subscription. We hope you will continue your support of the NJBA by upgrading from subscriber to member by sending in your \$10 today, or giving it to one of the directors at the next membership meeting. (For your convenience, you may send it in with the membership application form in this newsletter.)



How to Contact the NJBA Directors:

Name	Phone	FAX or Electronic Mail
Address	r none	TAX of Electronic Mail
Marshall Bienstock	(908) 780-0871	
Pete Engle	(908) 219-6560	pgengle@aol.com
Bruce Freeman	(908) 922-8408	
freemanb@pt.cya	namid.com	
222 Laurel Place,	Neptune, NJ 07753	
Bill Gerhauser	(609) 394-1817	(609) 394-7283
Joe Lyons	(908) 238-9131	
David Macauley	(908) 206-1568	drm@anchor.ho.att.com
Kevin Orangers	(212) 769-5038	kevock@amnh.org
Andy Vida-Szucs	(908) 308-9039	osan@netlabs.net

Insurance, but no Anvil Shoots

Director Andy Vida-Szucs has contributed \$228 of his own money to buy a general liability insurance policy for NJBA. (Thanks, Andy!) However, he tells us that while discussing this policy with the agent, they asked whether we planned to conduct anvil shoots. He assured them we didn't, so we won't be covered for such activities. (Oh, darn! What will we do at all those membership meetings?)

(For the benefit of the uninitiated, an anvil shoot is when you put an anvil over a pile of gunpowder and set off the powder. Altitudes of 100' have been claimed...)



Anvil Shoots are Out.. ...but Anvil Burns are "In"!

We're pretty disappointed that we won't be able to conduct anvil shoots. Nothing excites quite like having a hundredweight of anvil dead overhead! Have no fear, however: Our sister ABANA chapter, BAM (Blacksmith Association of Missouri), ever in the forefront of creativity at the forge, has come up with an alternative activity: the "anvil burn"! Below is an exchange (slightly edited) from TheForge which recounts this new activity:

Hey BAMmers,

Is it true that about 10 lbs. of the anvil you were going to replate melted and ran down to the bottom of the forge?

Hank and Todd were in California, so who would do something like that without their help?

Clay Spencer

Clay-

What are you stirrin' up? Was this one of those " I thought YOU were watchin' the fire" things?

Bill Roberts

Bill,

That's what I'm trying to find out. I hear that about 10 lbs. of anvil was melted in a gas forge while they were preheating it to weld a plate on. They thought it would take several hours to preheat and apparently didn't check soon enough. Or they were into the BAMBOOZLE beer that Todd bottled a few years ago.

I reckon McCarty's fingers are broke and he can't type anymore. Clay

Hey, Jim McCarty,

I heard that BAM conducted an experiment last weekend to determine if they could burn up an anvil. I really expected to see some results posted on theforge. Please enlighten us so we can repeat the work on our anvils. Don't leave out any details.

Clay

Clay,

Now there you go with the negative vibes ... everyone knows you can't melt an anvil in a gas forge. Now if you were to take the same preheated anvil outside, for example, and maybe dig a trench in the ground, and maybe put a piece of pipe in the ground and attach it to one of those Centaur blowers that don't work very well with rheostats, and then just say for example that you were to put three bags of coal over the buried pipe and light it and perhaps get a real hot fire going by running the blower full blast, and if you were to (for example) put your anvil upside down in the fire and maybe settle back for some good stories and some good Free State brown lager beer supplied by one Walt Hull from Lawrence Kansas (that's really good beer, would recommend visiting that place if you ever get to Lawrence. Did you know that a bunch of Missourians once burned Lawrence to the ground in the Civil War?) What were we talking about? Oh yeah, Clay wanted to know if in theory you could melt an anvil. What a funny thought, but then that's Clay. Always thinking of things...so then say you got to drinking Free State beer and just letting that big anvil simmer, and say you had someone really knowledgeable like Jerry Hoffmann and Tom Clark tending the fire, and say that this anvil had a little bit of the top plate still in place so you know that if you get it too hot it will start sending showers of sparks up into the air, WOULDN'T IT? Supposing all this happened and in addition it was time for the autumnal equinox when everyone in the world enjoys equal amounts of daylight and darkness. Did you know that their is going to be a lunar eclipse soon? You should all try to stay up late and see that. Anyway, yes, I guess it would be possible at least in theory to burn the middle out of an anvil but certainly not in a gas forge like John Murray has and you would probably burn much more than 10 pounds out of the middle (more like 50, at least in theory). If anyone would like their anvil repaired by BAM's excellent team of strikers who have been practicing but have never had the need to actually weld a plate on an anvil (not having one available at suitable temperature and with enough metal left amidships) then let us know and we will do the job for you. No warranty.

Jim McCarty

Clay,

The anvil was preheated in a gas forge, then taken to a pit with a large coal fire for the final heat. It was turned face down into the fire. Never saw any sparks, or other indication that it might be burning. After 15 to 20 minutes they turned it over to bring it out, and it was toast.

I don't know which was more spectacular, the burning of an anvil, or the look on Tom Clark's face.

I took pictures. If they come out I will post one somewhere. David Hoopes

Now, doesn't that sound like fun? Just 'cause we're a fledgling chapter doesn't mean we plan to be left behind. We plan to burn at least twenty pounds off an anvil, just as soon as we can get one of our members to donate one!



Forges in New Jersey by Bruce Freeman

This is intended to be the first of several occasional articles describing forges, public and private, in and near New Jersey. The aim is to provide a resource to the blacksmith who wishes to visit or use these forges. Not all will be available for use, so particular attention will be called to those that are available.

Historic Allaire Village, Farmingdale, NJ. The Allaire Village blacksmith shop is perhaps the largest extant shop in New Jersey, with four working forges and a tinsmith shop downstairs. It includes a molding bench for demonstrating sand casting, and several heavy machines for wheel and wagon work. These facilities have been maintained and renovated by the Allaire Village Blacksmith Guild, ably headed by Guild Master Bill Ker. This facility is available to anyone willing to volunteer his time as a historic interpreter and to undergo minimal training in blacksmithing and historical interpretation. Contact Bill Ker for details, (908) 223-4188.

Peters Valley Craft Center, Layton, NJ. Quoting the "Summer, '96" Catalog of Workshops, "For over twenty-five years Peters Valley has been offering a diverse program of craft workshops. Individuals can learn both traditional and contemporary techniques in seven crafts disciplines. Our instructors are among the best in their fields and offer students of all skill levels the opportunity to expand their horizons in a multiplicity of directions...." That catalog listed eleven blacksmithing workshops of three to five days (\$225 to \$335 per person), with subjects ranging from basic, through the pragmatic (tool making) to the creative.

The PV smithy includes four coal forges with electric blowers two gas forges, a treadle hammer, a power hammer, and two well-stocked tool cabinets. I recommend the complete novice learn fire making and the real basics elsewhere, (like Allaire Village) and then take a beginners' workshop at PV to gain some real understanding of blacksmithing.

Millbrook Village, Old Mine Rd., Millbrook, NJ. Millbrook village is about 8 miles south of Peters Valley, and the only time I saw it was after attending a class at PV, last summer. As I recall, the blacksmith shop has a single forge, two or three anvils, and miscellaneous other tools. In the past, the blacksmith was an employee of the Park, but not all costumed interpreters at Millbrook Village are employees. Therefore, some opportunity might exist for volunteer blacksmiths at this shop. I will provide better information when it becomes available.

Hunterdon Historical Museum, Clinton, NJ. The HHM (formerly the "Clinton Historical Museum") has an excellent single-forge blacksmith shop, complete with power hammer, that was set up by blacksmith Gil Meeker, a farrier who also does ornamental ironwork. The Executive Director of HHM, Andy Drysdale, is himself a blacksmith, and is interested in recruiting volunteer blacksmiths as interpreters in the shop. We are in contact with him, and hope to be able to announce the opportunities for volunteers in the near future. Interested persons may contact either the museum or me.

Longstreet Farm, Holmdell, NJ. (Monmouth Co. Park System) The blacksmith shop seemed fairly well equipped. On the second Sunday of each month, blacksmith and farrier Grant Clark comes in to shoe the animals and demonstrate

blacksmithing. Volunteers at Longstreet farm undergo about four hours training in historic interpretation (1890's) before becoming active interpreters, however they has no ability to train blacksmiths. Volunteer coordinator Susan Lounsbury (908-946-3758) is interested in working with NJBA to set up a blacksmith guild, and she or I would like to hear from an experienced blacksmith willing to chair such a guild. If we can find a person, there may soon be another blacksmith shop available to volunteers.

Batsto Village, Wharton State Park, NJ. I understand that the blacksmith shop at Batsto Village is completely gone. There is a Wheelwright's shop with a forge, but this is not in working condition. There is interest at Batsto in forming crafts guilds like those at Allaire Village. I'll keep you posted if I hear of opportunities.

Waterloo Village, Stanhope, NJ. I recently visited the grist mill and the smithy at Waterloo Village. The smithy is manned by a paid blacksmith, Bruce Hartrett, so there's no opportunity here to use the forge. It's worth a visit, however. Get the Waterloo Village events schedule and go on a day when there's an event of interest.

<u>Cold Springs Village</u>, Cape May, NJ. The blacksmith shop at Cold Springs Village is run by blacksmith Jerry Goldman. He teaches classes, but otherwise, I understand, there is no opportunity here to do blacksmithing.

Wild West City, Netcong, NJ. Arline Zatz was sufficiently impressed by this realistic reproduction of Dodge City to feature it in her book, New Jersey's Special Places (2nd Ed., The Countryman Press, Woodstock, VT, c. 1994. Available at the Allaire Village General Store), . It boasts a very creditable blacksmith shop. I understand that Andy Drysdale, of HHM, worked there one day a week this past summer. I have no further information as yet, but will keep you posted if I learn more.



NJBA Board Elects (Yet) Another Director

The NJBA Bylaws permint the election of directors by the board. Shortly after the original board was elected, it elected Andy Vida-Szucs, who had helped found the NJBA but was unable to attend the foundational meeting. Andy is new to blacksmithing, but not to metalworking.

The next director elected was Joe Lyons, who has been very active in the Allaire Village Blacksmith Guild. Joe is a sheetmetal worker and has experimented with ventillation of the Allaire blacksmith shop.

Most recently the board has elected Marshall Bienstock, who hosted the September meeting and will be hosting the November meeting as well. Marshall is a talented blacksmith who has attended courses at Peters Valley and the Campbell School. He is also an experienced welder.

Iron Parts for the LaTourette Mill... A NJBA Project. by Bruce Freeman

In the last newsletter I reported on our "discovery" of the LaTourette Mill in Long Valley, NJ, which is being reconstructed by the Washington Township Land Trust. In the week after that excursion, I spoke to Marshall Bienstock about the possibility of making the crane parts for the LaTourette Mill as a group project for one or more meetings. Marshall was interested, but naturally needed to know more about these parts. We quickly arranged to visit some grist mills to examine these parts.

I therefore contacted the Monmouth County Park System, which is renovating the Walnford Mill. In short order we were invited out the following Saturday. It seemed like it wouldn't be too much of an imposition. I also contacted Waterloo Village and left a message for the Facilities Manager, John Craft. Unfortunately, I was so busy that Friday, putting together the NJBA Newsletter, that I failed to check my phone messages at work (which I can do from home).

Walnford Mill. When Marshall and I arrived at Walnford Mill on Saturday, Sept. 7, we were greeted with enthusiasm by the two Parks staff on duty there, Sarah and Tom. They took us right in to the crane, and we were able to get a good look at it and take measurements. (I will spare the reader the details.) Then they wouldn't hear of our leaving without a full tour. We ended up spending two hours there. Toward the end of the visit we found a second wrench of the sort used on these cranes. This find alone would have made the extra time we spent at Walnford Mill worthwhile, even had we not been enjoying ourselves as much as we were.

The Red Mill. After taking our leave of Walnford Mill, we headed up to the Red Mill at Hunterdon Historical Museum. Andy Drysdale was off that day, but we got a good look at the crane they had, and took measurements. This was a very useful visit.

While at HHM, we ran into another amateur blacksmith, who was negotiating with the Museum to work in their blacksmith shop. We also got a closer view of the HHM blacksmith shop. It is a very nice shop with a good set of equipment. It would be a pleasure to work there.

LaTourette Mill, Revisited. Since we had to pass through Long Valley on the way to Chester, we stopped at the LaTourette Mill to see Walter Hollein. We spoke to him for a few minutes, then examined the crane and the screw, as well as the bale halves on loan from Cooper's Mill, and the stone the crane will have to lift. We took measurements of everything relevant.

We discussed what we'd found so far that day with Walter. He reiterated that he would prefer the wrench be of the design at Waterloo Village. We had no time to visit Waterloo Village that day, but we did make a run to Cooper's Mill, a few miles up the road -- only to watch them close up the place.

The Third Excursion. When I got back to work after the second excursion, I found I had a phone message from John Craft of Waterloo Village, inviting us up to see their mill. I responded, leaving another message, but didn't tell him when to expect us. I phoned Marshall and found that he was eager for another trip.

Cooper's Mill. Therefore the following Saturday we headed directly to Cooper's Mill, so as not to miss it again. There we found Keith Bott, Historical Sites Manager for Morris Co. Park Commission, filling in for the regular miller, Ivins Smith. Keith allowed us to inspect and photograph their crane, the wooden parts of which are rumored to come from LaTourette Mill.

Waterloo Village. From Chester we headed towards Stanhope to visit Waterloo Village. We parked and walked to the ticket booth where I mentioned John Craft's name, and our affiliation with NJBA. We were given "senior citizen" tickets and told where to find the grist mill. A short walk later we entered the mill and to our surprise found no crane wrench like that described by Walter. The wrench they had was a modern, arc-welded thing, and the "millers" knew of no other at Waterloo Village.

Minimizing our losses, we backtracked to the blacksmith shop. The blacksmith is an enormous fellow, 6'5". We had a nice conversation with him and gave him our brochure. Exiting the blacksmith shop, I hailed a Waterloo employee for directions. He read title of the brochure in my pocket," 'New Jersey Blacksmith Guild.' Bruce Freeman, I presume." It was John Craft. We had a nice conversation, in which he mentioned he was an archaeologist and historian, with a specialty in American Indians.

Batsto Village. About two weeks later, I was traveling through South Jersey on my way to get wine grapes when I stopped by Batsto Village, an old iron-making village in the Pine Barrens. I wanted to see the wheelwright's shop, which has a forge but which had suffered from archaeological excavation the last time I saw it. I found it still in the same condition - little change.

I had never really visited Batsto Village, though I'd gone hiking in the area many times, so I had a look around. To my surprise there was a grist mill in quite decent shape. Unfortunately the mill was closed, so I had to peak in the window, but I got a wonderful view of the millstone crane. It was a very nice sighting.

Coopers Mill and LaTourette Mill. On September 28 I headed off early with the intention of going first to LaTourette Mill to discuss the results of my researches with Walter. However, to from home to LaTourette Mill, I had to pass by Cooper's Mill, so I stopped in early to see what might be happening.

Cooper's Mill (phone: (908) 879-5463), which is part of the Morris County Park System, is a reconstructed, working grist mill powered by an overshot water wheel. The miller, Ivins Smith, was on hand and, by this time, had heard of my researches. I asked about the nut and wrench on the millstone. He was also interested, and, after some effort involving disassembling the crane, we determined that the wrench was quite similar to the spare wrench we found at Walnford Mill.

I left Cooper's Mill, intending to return for the blacksmithing demonstration, and soon arrived at LaTourette Mill. I spoke to Walter and Jim about the various nut and wrench designs. meeting. After a bit of discussion, Walter made a decision: He wants a square nut like Batsto, with a roughly 34" wrench, with handles gently curved up and with hand-forged ball ends. This seems very simple, so I agreed to it. We still have the problem

of machining the threads, but I'm pursuing several avenues for that effort.

I had come up to attend the event at Cooper's Mill, so back I went. Ivins was at the forge with his son Ben working the blower crank. As I watched him work we discussed blacksmithing and the various mills I'd visited.

Status of the Project. There was considerable enthusiasm for this project among the members at the September membership meeting. Since then, the board has discussed the project, and agreed to continue with it for the present.

The hurdle now is the nut. We need to finalize the design before we have it made, and we need the nut in hand before it is worth doing the rest of the fabrication. I have decided on a modification to the square nut design at Batsto: I want a tapered portion above to provide more length and, hence, more thread engagement. I have roughed out a design drawing, but need to settle on dimensions. Then I will sent this design off to a few persons who are interested in bidding on the job.

Once we know the cost of making the nut, we can add to it the cost of the stock for the wrench, bales and pins to come up with a total cost. At this point we can decide whether NJBA wants to pick up the tab. or whether we intend to get the funds through a grant or by other fund-raising means. Anyone interested in assisting in any of this effort should contact me.

Andy's Anvils Update

Those attending the September membership meeting learned of the delay in Andy Vida-Szucs' anvil project. Andy informs us that the outfit that was going to hard-surface the dies requoted the costs upwards. He is looking for another processor.

Forge Welding, What's the secret?

A subscriber to ABANA's internet newsgroup, "TheForge," wrote, "I tried my first attempt at welding, which failed miserably. I have not been able to find a book or article that explains the technique well enough for me to understand. I bent a piece of 1/2 inch square stock back over itself about three inches. Then I heated both layers until it was sparkling, placed it on the anvil and attempted to hammer them into one layer. What I ended up with were 2 very thin layers. What is missing?" He got the following reply:

1) Practice 2) Flux. 3) Practice. 4) Proper welding heat. 5) Practice. 6) Proper hammer technique. 7-10) Practice

Forge welding is tricky to learn but pretty easy once you get the knack. The only way to learn it is to heat some metal and try it over and over again. Your first attempt ALWAYS fails. If you're lucky your 20th attempt won't, although you'll probably be up around your 100th attempt before you can do it consistently. The best way to learn is to work with someone who already knows how to do it. You can work it out for yourself but it takes a lot longer.

Now, as to specifics, as I glean them from your description: You need to flux your metal to prevent oxide formation on the surfaces to be welded. Oxide is a weld-killer, surefire. Flux keeps the air out by melting and forming coating on the surface.

My favorite flux is ordinary borax, the kind that's sold in the soap section of your supermarket (*not* soap with borax added, but pure borax!). To use, you prepare your surface, heat to below

red heat, dip into the flux and make sure there's a clear, glassy coat on the surfaces to be welded. Then you put your iron back in the fire and bring it up to welding heat.

"Welding heat" is determined by experience. In most kinds of steel it is a clear yellow heat with a surface that looks kind of waxy. I know that's not much help, but it's the best I can do in words. You do not want the metal sparking. That's too hot and won't make a good weld. (You're probably also putting too much oxygen into the fire but that's another issue.)

The hammer technique is also hard to describe. I bring the piece out of the fire, lay it on the anvil and immediately strike a couple of light blows to kind of tack it together. Then I start hammering at the center and work outwards to drive the flux and impurities out of the joint. You don't have to smash the work, but you do have to strike hard enough to consolidate the pieces.

Bending a bar of metal back on itself and welding it is a good way to practice. When you finish a weld, let it cool in the air and then take a cold chisel and cut through the welded section to see what the interior of the weld is like. The biggest problem with forge welding is getting a clean weld in the interior without inclusions of slag or air pockets that will weaken the weld.

Keep at it and good luck! -- Rick Cook



Calendar of Events

Sat./Sun., Nov. 2-3, 1996, East Coast All Blacksmith Christmas Show, Agricultural History Farm Park, Derwood, MD. (Sponsored by three ABANA chapters and two other organizations.) 10-4 each day. Sales and demonstration spaces available. Camping available (for blacksmiths). For further information and applications, contact: Stu Booher (301-424-2889), Bob Morris (301-253-2084), Ken Zastrow (301-622-0897), or Bill Wojik (540-253-5121).

Sunday, Nov. 17, 12 noon at the forge of Marshall Bienstock. NJBA Membership Meeting. "Basic Welding" and "Anvil Restoration". See page 1 for additional information.

To get to Marshall's, find your way to US Route 9 in Howell (Monmouth Co., NJ). About 3 miles north of Interstate Route 195, or 4 miles south of NJ Route 33, turn east onto Casino Drive. Box 663 is about one-quarter mile down the road. Turn into the driveway, drive past the tous and to the last outbuilding.

Saturday, Dec. 14, 10 am, at the blacksmith shop in Historic Allaire Village, Allaire State Park (Monmouth Co., NJ). NJBA Membership Meeting: Mini Hammer-In: "Christmas Greetings". See page 2 for additional information.

To get to Allaire State Park from north or south, take the Garden State Parkway to exit 98. Get onto Interstate 195 west. Get off at exit 31B and make a right turn at the traffic signal onto Route 524. Go about one mile to the entrance of Allaire State Park. Drive all the way down the road to the parking lot. Walk down the dirt road past the visitor's center and past the mill pond to the large blacksmith shop on the other side.

How to Join the NJBA

NJBA dues are \$15 per year. Please make out your check to William Gerhauser (NJBA Treasurer). You may note on the "memo" line that the check is for NJBA dues. Please mail checks to Bruce Freemanm (NJBA membership), 222 Laurel Place, Neptune, NJ 07753, along with your completed membership form. You will receive a receipt for your membership dues within four weeks.

Required Information			
(This information will be listed in a roster available to other members, unless you request otherwise.)			
Name Hom	ne Phone		
Address, City, State, Zip			
Optional Information List any of additional information that you would like included in the membership roster (use a separate sheet if necessary.)			
Other Phone , FAX , E- mail			
Years of experience as a professional/amateur (circle one) blacksmith (not required for membership)			
Your occupation and areas of knowledge and interest			
What do you want to get from your membership in NJBA?			

New Jersey Blacksmith Association

Newsletter

222 Laurel Place Neptune, NJ 07753