Issue 90 - Spring 2004

Many Happy Returns

The Houston Boomerang Expo and National Boomerang Championship was a great success! There were also many folks who took great pictures! Interspersed in this issue are more pictures from the Expo which were taken by Danny Coppedge. If you see a picture within this issue that is not directly related to the article it appears next to, it is one of Danny's pictures. I used these for filler in this issue, and to show off some of Danny's fine photographic work. To the right is Dan Bower throwing MTA in high winds with Herb Smith boom. Directly below is a Don Monroe "Vorlon" AR boomerang, which is fast becoming the weapon of choice in high winds.

OK… who's up next?

Official Publication of the United States Boomerang Association

- To promote the art, hobby, craft, sport, history, culture and science of boomerangs
- To organize and hold an annual National Boomerang Expo
- To represent the United States in International Boomerang Competitions

Eric Darnell

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Top Ten - Advanced

A Letter from the President

Processionists,

A quick note to let you know what has been going on in the USBA since the last MHR.

The board spent many, many (amazing number of) hours investigating what looked like inappropriate use of USBA funds. Happily, we learned that all USBA funds were allocated through the board. This whole incident reminded me that boomerangers are a very special group with high integrity and a huge degree of honesty. Thanks to everyone who gave the board advice regarding this issue. Whew, we're all glad it turned out to be ok and now that this issue is behind us and the board can focus on promoting the art, science, and sport of boomerangs!

Speaking of finances, just to give you all an idea on what the USBA spends yearly, here's a break down of its major expenses. Insurance costs $2500 per year, to publish and mail MHRs cost $700 per year, and various other costs (like Toss Across America, postage, printing, …) costs about $600 per year.

With these costs in mind, the board has been discussing the cost of Insurance (Sanctioning) fees for tournaments. A couple years back, the board reduced sanctioning fees for tournaments in hopes that more tournaments would be held, but about the same number of tournaments were held (excluding Billy Brazelton's weekly tournament). So the board has decided that the competitors should pay the majority of the cost of the insurance. As such the sanctioning fees have been raised to $50 for a Demonstration, $80 for a single Tournament, and $150 for multiple Tournaments. Even with the raised prices, this is still a great deal.

Now to a very cool program being developed by the USBA through its membership. Morri Mohr volunteered to do whatever the USBA needed. I don't know if that was a good idea or not, but I've asked Morri to put together a program to assist Scouts earn their Boomerang Merit Badge. I'm looking forward to seeing the USBA be THE PLACE for Scouts to go for Boomerang Merit Badges. This program IS the type of thing the USBA should do to serve our community and to promote boomerangs to the general public.

As many of you know the USA will be sending a team to Charleville-Mézières, France to compete in the Boomerang World Championships and bring the Cup back to the US again. The first step in the process is to select a Team. As announced last MHR, the team trials will be in Seattle at the end of March. A whole team of volunteers has been working to make the trials a success and to find sponsorship for the Team Trials, the Team, and the USBA. Suzanne Ragan-Lentz is heading up this team. A funny thing happened a couple weeks ago, The Corporation for International Business contacted me to see if they could sponsor the team, the Expo, and the USBA. I've talked to the CIB folks a bunch of times, and they are VERY cool. After a lot of discussions with them, the CIB they have decided to see if sponsorship of boomerang events will fit into their corporate image so they will sponsor the Team Trials. This is excellent news and hopefully just the beginning of a long relationship the USBA will have with the CIB. Check out their web site to learn more about them and boomerang freights Very cool stuff. Thanks to Richard Pollock-Nelson for sending them to the USBA!

I'd like to thank the following people:

Suzanne Ragan-Lentz, for leading the sponsorship team

Fred Malmburg, for starting the boomerang challenge to help raise funds for the USBA. See the last MHR for details

Morri Mohr, for putting together the Boomerang Merit Badge Program.

Richard Pollock-Nelson for sending the CIB to the USBA and starting the process for a great sponsorship relationship

To close this message, I'd like all of you to think about how you can personally promote boomerang art, science, and competition. You can give a demo, teach a class, start a club, hold a weekly throwing session, have a tournament, hold a Toss Across America Event, throw in a park and teach anyone who comes up to you about boomerangs, or send an article to be published in MHR. If you don't feel like you've done enough to promote boomerang art, science, and competition, consider making a donation to the USBA.

Finally, a HUGE thanks to our Editor, Kendall Davis, without Kendall's hard work supporting the USBA in so many ways, you would not be getting this news letter, and the USBA wouldn't be running as smoothly as it does. Support the USBA, Kendall, and continue to see high quality MHRs by making submissions for publication.

See you on the field!
Clay

USBA Honor Roll:

The following people made donations to the USBA at the end of 2003:

Howard Gantz 50.00
Christopher Garlich 100.00
Bud Pell 25.00
Clay Dawson 50.00
Steve Kavanaugh 50.00
William Gix 40.00
Suzanne Ragan Lentz 50.00

Thanks to all of you for your generous support. I expect there will be another group to honor when Fred Malmburg's boomerang challenge ends.

List Of USBA and US Team Sponsors:

Corporation for International Business
Drachen Foundation
Essential Baking
Ted Bailey
Michael Gel Girvin & Hien Loung Pham
Will and Sara Herlan
Jim Nelson
Tully's 5 corners
Albertson's - Woodinville

Ted Bailey Auction to support the US Boomerang Team

Ted Bailey's spring auction has 20 items where all the proceeds will benefit the US Boomerang team. Thanks to Ted for putting these items up for auction for the team see www.flight-toys.com to view and bid on these items. I personally love Ted's auctions because it gives me a change to look at so many one of a kind boomerangs from all over the world. Check it out.

Boomerang were donated to Ted's Auction to support the US Team by:

Richard Bower,
Clay Dawson,
Rich Harrison,
Will Herlan
Stanislaus Plewinski

Thanks to all of you for supporting the US Team!

Ten Questions with Ted Bailey - Dave Hughes

Question #1

When, at what age, and thru whom (if anyone) did you first get into boomerangs?

Ted:

My mother bought me a boomerang when I was in the fourth grade (1959). It was one of those early (pre-Hawes) Wham-O plastic models with embossed instructions that said "Experiment". This I did for about a week without success. I was a lefty throwing side arm and as hard as I could throw. It just didn't work, but I was determined. I decided to take it to school one afternoon to see if any of the other kids knew how to make it work. I threw it on the way to school and accidentally put it through the window of a home. I approached the home to take responsibility for the mishap and was met by a large screaming man who was waving it in his hands as he started to chase me. I was able to run faster than the man and made it to school without him in sight. I took the long way to/from school for the rest of the year and didn't throw another boomerang again until I was in college. I studied Engineering in college. One day when I was taking Dynamics and Fluid Mechanics classes, I stopped into a sporting goods store to ask directions. The Hawes plastic Wham-O boomerang was on the counter, so I bought one because it seemed to demonstrate so many of the Engineering fundamentals that I was studying in school. Just like when I was in the fourth grade, I became obsessed with the damn thing, even though I couldn't throw it properly. After a day or two, I figured out that the problem was that I was a lefty and needed a mirror image boomerang. I bought a sheet of cheap Fir plywood and made a lefty. It worked exceptionally well. In fact, it worked much better than the plastic Wham-O. This got me hooked and I have been involved in boomerangs ever since.

Question #2:

After the Wham-O and the wooden one you made, what was your first store-bought boomerangs? Do you still have them?

Ted:

I still have the first Wham-O and homemade boomerangs in my collection. I used to take the homemade one out for a toss annually, but haven't done that in a decade or so.

About a year after making my first boomerang (and a bunch of others too), I went into the Mechanical Engineering office at the college I was attending to ask the secretary for a schedule change. The top item in her in-box was a bright yellow flyer with boomerangs. She gave it to me when I got down on my hands and knees and started begging for it. It turned out to be the first Boomerang Man catalog. Rich had mailed one to every college in the USA with an Engineering or Physics department and I just happened to be in her office at the right moment. There was another Engineering student whom I had taught to make and throw boomerangs. We were best friends at school because I was from Panama and he was from Colombia. Together, we ordered a Hawes M-17, a Bunny Read Small Hook and a Jeff Lewry Hook. They were all really nice, but the Lewry Hook had a bad negative dihedral warp in the lift arm and my friend could not throw it at all. When I threw it with my crazy-right-handed-boomerang-in-the-left-hand throw, it made a perfect 60 metre flight about 6 inches off the ground all the way around. At the end of the flight, it just lifted up and went into a wonderful hover at waist level just inches in front of me. It was awesome! It was my favorite boomerang for more than a year until my friend broke it. We glued it back together and it never worked at all after that. I didn't know anything about tuning at the time. I wrote to the Boomerang Man and asked him for the longest ranged one that he had in stock. Rich went out and tested every one that he had and sent me a really long range one. It flew in a typical hook flight pattern and I was terribly disappointed. It was about 10 years before I figured out how to tune one to fly like the first Lewry Hook that my friend and I purchased. One small note I would like to make is that I was one of the B'Man's first customers and the Secretary from my college Engineering office is still friends with the B'Man after all these years!

Question #3:

You mentioned that you're a lefty, and I notice you always give LH booms their separate spot in your auctions. Do you or did you ever compete in boom tourneys, and if so, did you find that being a lefty is a handicap, or an advantage?

Ted:

The first tournament that I ever participated in was at Chet's Free Throwers tournament in 1982. I threw right handed boomerangs with my left hand. Many people openly commented to me that I was throwing wrong, even though I won two events that day, including the Fast Catch event using an old plastic Wham-O. From 1982 until 1989, I competed regularly, always throwing right handed boomerangs with my left hand and I usually did pretty well. I actually felt uncomfortable throwing a left handed boomerang with my left hand unless it was in the Long Distance event. I usually placed in the top 3 spots at tournaments and even won a few. I would have won more, but there was this guy named Chet who always beat me. I employed new and different techniques such as using the same Fast Catch boomerang to take first place in both Aussie Round and

(Continued on page 6)

Boomerang Clubs

(*and online forums, open shops for instruction, etc.*)

Contact info for boomerang throwers around the USA

ONLINE

BOOMERANG TALK - Your one-stop, non-stop online boomerang club. Keep up to date on the latest info and chatter from the boomerang world. Join at: http://groups.yahoo.com/group/BoomerangTalk/join

USBA_info - This is a USBA members only group for the online discussion of issues. This group is closely monitored by the Board which makes for an "open door" policy for complaints or concerns. Join at: http://groups.yahoo.com/group/USBA_info/join

Other (local) boomerang discussion groups are available at YAHOO! http://groups.yahoo.com - search "boomerang".

ARIZONA

Desert Ranglers
Mark Weary & Don Monroe
4026 East Cholla Canyon Dr.
Phoenix AZ 85044
(602) 759-3973

COLORADO

Richard Pollock-Nelson (Colorado Boomerangs)
2530 S Ouray Way
Aurora, CO 80013-1576
(303) 368-5933

CONNECTICUT

The Wandering Nutmeg Boomerang Society
Paul D. Sprague
782 Boston Post Rd.
Madison CT 06443
(203) 245-8211

FLORIDA

The Orlando Boomerang Club meets every Saturday morning at 9:00 to throw boomerangs at Memorial Middle School. For more information please contact Cookie (teamgel@cfl.rr.com) or Mike Hudkins (Fatfinger@cfl.rr.com)

Flite Stix Boom Slingers
Rich Surace
855 E Crisafulli Rd.
Merritt Island FL
(407) 452-3963

ILLINOIS

Rock Island - Kendall Davis has a fully stocked boomerang shop with several materials to choose from and virtually any crafting tool you may need. ***If you make it, you take it!*** There is also a guest bedroom for use and the greatest cook in the Midwest prepares the meals.
Ph. 309.793.9885 or send e-mail to boomerang@master-designs.com

INDIANA

Indianapolis Boomerang Club
Tony Brazelton
1184 Barrington Dr
Greenwood IN 46143
(317) 883-2334
brazelami@yahoo.com
http://www.usba.org/chapters/indyboomclub

MINNESOTA

Minneapolis/St Paul - Boomerang Organization Of Minnesota (BOOM)
http://www.uboomerang.org
current record-holder for most tournaments hosted in a season!
Contact Stuart Jones
circlestixstuk@webtv.net
651-228-1393
The Twin Cities Summer Series of Boomerang Competitions runs weekly through October on Saturdays at 3:00 pm, at Como Park (softball fields across from the pool, on Horton) in St. Paul, MN. beginning the 1st Saturday in May.

NEW MEXICO

Sandia Boomerang Club
Steve Sanders
10408 Woodland, NE
Albuquerque, NM 87111
(505) 294-8842
http://homepage.mac.com/boomerangs

OHIO

Canton - Gary Broadbent's boom shop and field next door. One of the most prestigious shops in the country, fully outfitted with materials for making all types of boomerangs. Featuring prolonged boomerang-making sessions followed by 3 am grilled cheese sandwiches, surrounded by one of the world's most extensive collections of boomerangs. Call Gary at (330) 492-RANG to inform of your arrival.

Delaware - Gregg's Boom shop and field down the road. Stop in, make and throw some booms and sign the guest book. Nightly drink specials. Call Gregg at (740) 363-4414 or email at boomerang@columbus.rr.com

TEXAS

Republic of Texas Boomerang Society
(TexBoom Yahoo! Group)
Dave Hughes
1818 Cotton Mill Ct.
Richmond, Texas 77469
(281) 341-0934
dlhughes001@juno.com

PENNSYLVANIA

Allentown - Dave Hendricks
"P/NJ Boomerang Group"
1086 E Gordon Street
Allentown, PA 18103-2208
(610) 434-7305

VERMONT

Vermont Boomerang Association
Paul Gustafson
South Burlington, VT
(802) 859-3430
paul@vermontboomerang.org
http://www.vermontboomerang.org

Submit or update your listing by sending e-mail to the editor at: MHREditor@usba.org

Fast Catch in the same tournament or by using a pair of MTAs to place well in juggling. Other competitors would often get angry when I did these things, even if it was perfectly legal to do so. As an Engineer, I usually showed up with new technology and this always gave me an edge. I had to keep developing new models as others always copied models that worked well. When I first started competing, most of the competition boomerangs were large. In 1983, I used Buckingham Pi dimensional analysis to develop several Mini designs that were fantastic competition models, especially in windy conditions. These were much different from the mini models that were sold as novelty boomerangs. My minis were hot and I sold a ton of them at tournaments. Soon, most models made by others were also scaled down to become competitive.

I first saw a MTA boomerang at the USA/Aussie Challenge Match in 1984. The best ones were good but they were large and without advanced tuning, so record flights were only 20-30 seconds in ideal conditions. No one had flights over a minute. Peter Ruhf had the best MTAs on the competition field, but he kept his MTAs in a large sock, taking one out of the sock to throw and then quickly putting it back into the sock as soon as it was caught so that nobody else would see what he was using. Nobody marketed MTAs, so only a few throwers had good MTA scores and competition results were based more on competitive knowledge, rather than their throwing abilities. I didn't think this was fair, so I spent the winter of 1984/1985 developing a much smaller MTA that I could market at a low cost so that everyone could have good equipment for the MTA event. The first MTAs that I made used the best technology available from other boom makers: The Burwell Rippah for airfoil and blade tip design; the Wilhelm Bretfeld MTA blade length ratio & included angle; Al Gerhards' tuning techniques and my own dimensional scaling to reduce the size of the final product. One of the first MTA models that I developed in the Spring of 1985 gave me a flight of 67 seconds. A few days later, I had a throw with a catch of 133 seconds and then I started loosing them to the Jet Stream God. I lost more than 70 over the next 2 years! Ben Ruhe sold these MTAs to the masses at a really low price and soon everyone was getting the flights that they wanted. The current World Record in MTA was set by Eric Darnell using a Midi-MTA boomerang that I made in 1985.

Using right handed MTA and Fast Catch boomerangs, I was the first person to ever do solo Super Catch (throw your MTA then do a complete round of F/C underneath and then catch the MTA by yourself) in 1986. At this time, I had the top scores in competition MTA for the year and only John Flynn had a better rating in Fast Catch. This was my best year for competition. I did well for the next couple of years, but eventually became discouraged with competition because Suicide, Juggling, Long Distance and MTA unlimited all disappeared and the revised events were not nearly as much fun. Also gone were the night throwing tournaments which I liked a lot. Newbie throwers have no idea how much fun the tournaments were back in the early 1980s. If someone were to hold a tournament with the old events and rules, I would probably start competing again.

Question #4:

My next question was going to ask what you do for a living, but you beat me to the punch! So, do you have any one favorite boomerang, or a set of favorites for different events/uses? What are they?

Ted:

Actually, I was an Engineer until two years ago. The company that I worked for closed the doors, letting everybody go. At the same time they built a new technical center 40 miles away and staffed it with young guys right out of college. I have sent out more than 100 resumes since and haven't had a single offer, probably because I am over 50. At this time, I am marketing boomerangs until I can find another Engineering job.

I have my favorite boomerangs for collecting and my favorite boomerangs for throwing. It would take forever to discuss my collection so I will focus on my favorite boomerangs for throwing. There is nothing more exciting than a Gerhards strip laminated boomerang. I have three of these that are my favorites for throwing: a Big "U" lefty that looks like a slightly scaled down St. Louis Arch in flight, a double offset laminated standard hook with a range of about 90 metres and an omega that makes a low and perfect 50 metre circle. George Reitbauer made a similar S/L omega that flies equally as well and both of these are my favorite omegas. Jean-Marie Gachon from France sent me a Lucky 7 hook in 1997. It flies 60+ metres at an altitude of less than a metre in height all the way around. I don't throw this one too often for fear of breaking it. It flies like the Lewry Hook that I bought in my first purchase from the B-Man in the 1970s. I have a two bladed Fast Catch and Midi-MTA that I made in 1986. These were used to do the first Super Catch. They still fly as well as they did 18 years ago and I have never had to tune them. I did Super Catch with that pair again last year. Other favorites include: an odd looking thing made by Barnaby Ruhe that flies in any wind conditions; a set of Behrens Paxolin Jugglers that works really well together (but not separately), a Behrens Paxolin Solstice and a Behrens Paxolin Geronimo Hook (both models give me 50+ metre accurate flights in either wind or calm) and more than 50 other favorites that I keep in my throwing bag

for demos and sports throwing. It is really hard to identify favorites as there are so many great boomerangs out there. I was fortunate to be an editor for MHR, Boomerang News and Boomerang Journal for a very long period of time when a lot of the best technology was being developed. The makers sent me the cream of the crop to review. I have preserved everything very carefully for future generations. It would be fun to do a historical documentary on the evolution of boomerang technology and demonstrate the best equipment as it changed from the 1970s through the 1990s.

Question #5:

Your idea of doing a historical documentary on the history of competition and sport boomerangs is a great one! Do you have any plans to do that? If so, in what form would it be? Book, CD presentation, etc.?

Ted:

I helped the South Australia Museum do a CD-Rom on boomerangs & throwsticks (Echos of Australia) several years ago and that turned out well, but I was a minor player and didn't get enough contemporary boomerangs into the CD as I would have wanted. I would like to do a DVD where my role is primary, but this would be very time consuming and I need better video editing equipment to put it into the DVD format.

Question #6:

Well, I 'm sure everyone would like to see what you would come up with! Getting back to your competition days &who were some of your contemporaries and competitors? Did you compete in any international championships?

Ted:

I never tried out for any international teams because I had an Engineering job with little or no vacation time. The only international event that I ever threw in was the individual events for the 1984 Aussie/USA Challenge Cup. I didn't do very well because I was distracted with meeting a lot of people for the first time, trading booms with the Aussies and coaching a team of teenagers from Toledo as they competed in their first tournament ever. The kids took 1,2 & 4 places in the junior events which made me proud so I didn't care much how I threw that day.

The first boomerang thrower that I met that I didn't teach to throw was Rusty Harding in February 1979. I had been throwing for 5 or 6 years. I lived in West Palm Beach, Florida and Rusty lived just up the road from me in Vero Beach. I was amazed how well his boomerangs flew and I really liked his innovative oddities, such as a tri-wing Fokker. Rusty had a really nice collection too. In 1981, I met Mickey Kinley quite by accident. Mickey had been throwing for only a couple of months and he had made some nice S/L traditional models. I introduced him to the Gerhards hook and shortly thereafter, Mickey was making his own mean long distance hooks. Eventually Mickey went on to development the Boomalum (Aluminum hook) which was very popular in the early 1980s, but banned because it was potentially very dangerous in the wrong hands. In the early 1980s, I met Al Gerhards and spent quite a bit of time with him learning everything that he knew about tuning S/L boomerangs. I would never have been able to develop the MTA tuning method without Al's instructions. I met most of the famous Aussie throwers in 1984 at the Challenge Match - Rob Croll, David Schummy, Bunny Read, Bob Burwell, Dennis Maxwell, etc. I also met Lorin Hawes about the same time as he was visiting his brother in Cleveland. The best USA competitors that I competed against in the 1980s were Chet, Gregg & Brett Snouffer, Peter & Larry Ruhf, Barnaby Ruhe, Eric Darnell, John Flynn, Tom Fitzgerald, Michael Girvin, Moleman, Ron Tamblyn, Mike Forrester, Jerry Caplan, Will & Betsylew Miale Gix, Stuart Jones, Gary Broadbent, Richard Harrison, Dennis Joyce and Ray Laurent, and a lot more. It would take me too long to list everybody who was around back then, and I didn't even mention throwers who were often there, but not always as a competitor. I also received the occasional visitor from overseas: Max Hoeben, John Gibney, Volker Behrens, Roger Perry, Rob Croll, etc. It is so easy to make friends in the boomerang community and that is one of the best parts of the sport. Most boomerang throwers have an open house policy and I have always enjoyed my visits with all of these folks.

Question #7:

Do you still get around to tournaments when you can? If so, who

(Continued on page 21)

THAT'S LIFE BY MIKE TWOHY

U.S and International boomerang manufacturers and supplies

United States

A Boomerang Armada
Jack Claycomb
A-Boomerang-Armada.com
P O Box 41431
Houston, Texas 77241
713.937.9105

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P.O. Box 6734
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Tom Conally
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336.584.4046
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http://fly.to/boomerangs
conally@netpath.net

Kalmanson Boomerangs
Kalmanson reversible art boomerangs
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Swainsboro GA 30401
(912) 237-7831

Master Designs Boomerangs
Kendall Davis
932 21st Street
Rock Island, IL 61201
(309) 793-9885
http://master-designs.com/catalog
boomsmith@master-designs.com

TBoomz
R. Foust
P.O. Box 146
Whitsett, NC 27377-9744
336-697-1279 evenings best
six models, just recreational [no competi-
tion] mostly baltic birch plywood and solid
wood

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grang@bartnet.net
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Home of Chet Snouffer, 12-time National
and 3-time World Champion! Web sight
offers a wide variety of boomerangs and
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John Villagrana
P.O. Box 2393
Santa Fe Springs, Ca. 90670
whishhbone@email.com
http://whishhbone.freeyellow.com
traditional boomerangs hand crafted from
Finland Birch plywood

The USBA provides this listing as a free service for members. For your own free listing on this page, email your info to Kendall Davis at MHREditor@master-designs.com

International

Jeff Lewry - Australia
www.users.bigpond.com/jefflewry/
A variety of information about boomerangs. The boomerang page includes history and stories that are fascinating.

Bumerangue.com - Brazil
Ricardo Bruni Marx
Estrada da Fazendinha, 4619
Carapicuiba - SP - Brazil
Tel: (55) 11 7856-1440
Fax: (55) 11 4169-7551
Http://www.bumerangue.com
webmaster@bumerangue.com

Georgi Dimentchev - Bulgaria
http://monsite.wanadoo.fr/dimana_boomerangs/
Georgi is one of the most innovative composite MTA makers in the world. See his entire line, which are readily available .

Wallaby Boomerangs -Canada
Stéphane Marguerite
5026 Cartier, Montréal, QC, H2H 1X5, CANADA
Tel: (514) 597-1333
Fax: (514) 597-2281
www.wallabyboomerangs.com
info@wallabyboomerangs.com
Sport boomerangs for beginners to experts

Jens Krabbe - Denmark
Ringkøbinggade 15, 4.th.
DK-2100 Copenhagen
DENMARK
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Not mass produced… just consistent crafting - Kendall Davis

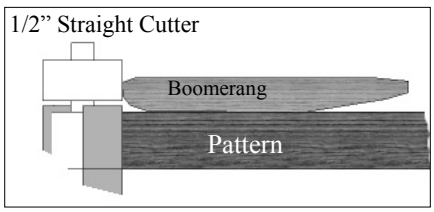
I'm about to let you in on a "trade secret" that isn't so much a secret – it's just not very well known. Although I have never seen any other operations, I assume the makers of "Mass Produced" boomerangs use techniques similar to the ones I will be describing in this article. While I was at the WBC in Edwardsville, IL (1998), I was speaking with another crafter who described how one company made boomerangs, and it just clicked. If you have ever used a router or shaper to make identical wood parts, this will be even easier to understand. Once you see it, I think you will agree that it just makes sense if you are planning to make a plethora of similar boomerangs. Of course, nothing is exact in the world of wood, but if you want to make relatively consistent boomerangs, this process will point you in the right direction.

Setup

First of all, you will need a router (plunge type recommended), a jigsaw or band saw, a belt sander for creating the trailing edge, and a palm finish sander or orbital sander. I also use a 3x9 pneumatic sander for an intermediate sanding step. If you can afford one, the pneumatic sander is a real time saver.

The router should be mounted in a table so you can use it like a shaper. The bits I use for making patterns and boomerang blanks are 5/16 or 3/8" round over, ½" straight cutter, and a specialty bit which was reshaped by my father-in-law for making the trailing edge of the airfoil.

You will want to create a pattern for your boomerang that is the exact size of your finished boomerang by using 3/8 or ½ inch plywood. I use high-grade plywood for the pattern so there are little or no voids between the plies. If you have a boomerang you want to use as a pattern, you can rough-cut the shape of this boomerang and use two-sided tape to stick the boomerang



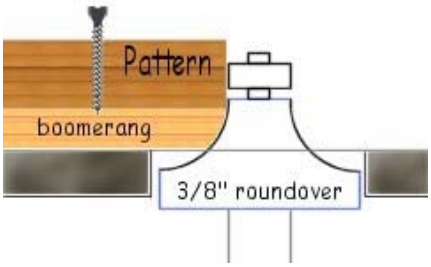
(face down) on your pattern. Place the ½ inch straight cutter in your router and position it so that the bearing will run along the edge of your finished boomerang. This will create the pattern with exactly the same shape as the original. You may wish to sand the edges to take out any rough spots or inconsistencies.

Once you have created your pattern, you will need to put some "handles" on it. The handles will serve two purposes; 1) securing the boomerang blank to the pattern, and 2) giving you a hand hold for manipulating the pattern on the router table. You will want to drill at least three – 3/32" holes in your pattern and place a 2-inch deck screw through each hole – protruding about 1/16" through the pattern. This will bite into the boomerang blank, and keep it from slipping or being thrown out from the router bit. You can also get some ¼" clear tubing and cut short pieces to slide over the screws to make them easier on your fingers while shaping. You may also opt to put small drawer pulls over the screws – but I do not think this makes it any easier for shaping.

Making The Blanks

Now that you have your pattern prepared, you can make boomerang blanks. Use your pattern to draw out the boomerang(s) on your plywood. Check the plywood for warp, and place the warp down. You will be drawing out the shape on the back of the boomerang blank. Having the warp down will use the dihedral in the boomerang blank to your advantage.

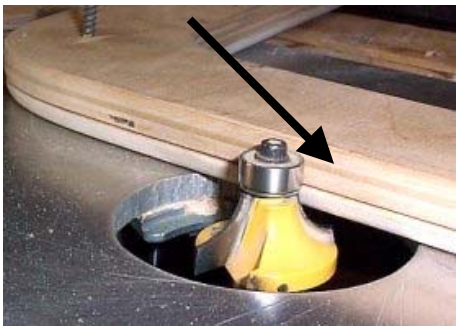
Set the pattern on the wood, and press down to initially set the screw points into the wood. Now, draw around the pattern. This will give you a slightly oversized pattern. Cut out the shapes with a jigsaw or band saw,



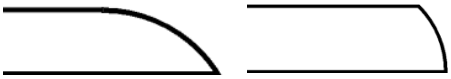
but do not cut through the line. You can make the pattern larger than the outline, but try to leave 1/8" or less material, so your router does not have to work as hard to take off the wood of the blank.

Once the rough cuts are done, you will want to place the 5/16 or 3/8" bit in the router and position it so that you are using the top 70% of the shape. This will result in a slightly rounded edge on your boomerang blank. The 5/16" bit will be better for thinner woods, or if you want to make a more rounded leading edge at the outset. Make sure the bearing of the bit is running solidly against the pattern. If the blank is thin material (3-4mm or less), you may want to drop the bit a little more. If you raise the bit too much, if will cut more of the blank, and make it slightly smaller than the pattern. The reason I recommend 3/8 or ½" pattern material is so the screw will not wiggle or work it's way out with use. Also, the bearing has a larger surface to ride against with thinner materials.

Place the pattern on the cutout(s) and position it so the screws set into the small indentations, then tap them with a hammer to set them more firmly into the wood. Start the router and feed the pattern and boomerang into the bit by moving it to the left as you move it into the cutter. This will keep it from biting into the wood too quickly, causing a kickback. Keep a



solid downward pressure on the pattern as you run it along the bearing. Keep the pattern moving as it is cutting so you do not burn the wood. This will also keep from damaging the bit due to excess heat. Conversely, if you move it too quickly, the blank will be rougher, and need more sanding because of tear-out.



The examples show too much cut on the first piece, and the optimal shape in the second piece. The second piece will have the corners knocked off with a sander to create a more "flowing" LE. You can leave this blocky of you are making a competition airfoil or are using thin stock, etc.

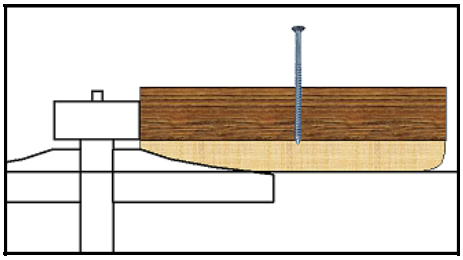
Keep moving around the pattern until you have overlapped the beginning of the cut. If you have to stop to reposition your hands, pull the pattern away from the router bit so it will not be caught as you release the pattern. After repositioning, start the cut again in a previously shaped area to retain a proper flow. This will result in a boomerang blank, which is the same size and shape of the pattern, yet has a leading edge all around. You will have small pinholes in the back of the boomerang, but these are easily filled if you want the back to be perfect. If you think ahead while placing the screws, you can use the indentations as guides for holes or weights. The pattern you have created can now have the trailing edge applied with the belt sander, a drum sander, or a rasp.

Creating The Trailing Edge

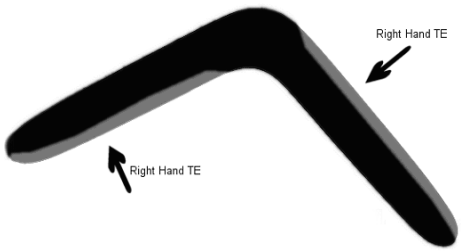
You can create the trailing edge with a belt sander in the same way you normally do. Your previous work has just decreased the time it takes you to get to this point. I will not insult the reader by discussing angles or wing lift. If you have made a returning boomerang in the past, then nothing I could say here would be earth shattering to you. If you have never made a boomerang before, this process should be shelved until you have a few blisters or scrapes from a rasp or sanding block.

If you want to use a bit to create the trailing edge, Sears used to carry a Rail & Stile bit for cabinet making which works for taking off a major amount of wood to create a trailing edge. It is part number $^{9}/_{21259}$, but I do not believe it is still available.

If you can get the Sears bit, or a similar bit with a long taper of about 10-12 degrees, this will also decrease the amount of finish work you will have to



do on your boomerang blanks. You will want to place this bit in the router and set it so that the profile created looks similar to the example. You will also want to only shape the wings' trailing edge to make it a proper left or right hand boomerang. A right hand boomerang is shown in the next picture. It looks backward, but remember that you are shaping the boomerang upside down. You will also discover that a right handed airfoil is easier to make due to the rotation of the cutter.

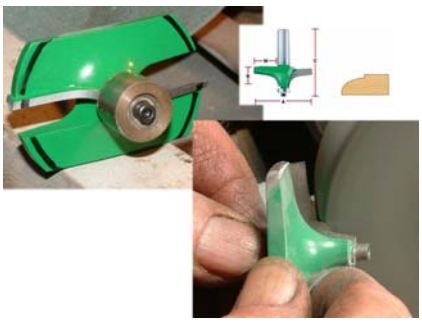


My father-in-law has created the best trailing edge bit I have ever seen, from a large thumbnail bit. I will give a few details here, but there will be more detail in the online version of this article. (For those of you brave souls who have a metal lathe, a green wheel and some other necessary tools.)

I purchased a giant thumbnail bit from Grizzly which had a swing of about 2.5 inches (6 cm) and a 1/2-inch bearing. My father-in-law created a sleeve to fit tightly over the bearing which made it 3/4 inch across and also 3/4 inch deep. We then ground 1/4-inch off each side and reshaped the carbide with a green wheel - paying very close attention to the shape on each

blade. Once we were satisfied each blade was as close to matching as possible, we the replaced the bearing assembly and gave it a test run. After a small bit of adjustment, this bit has decreased my necessary sanding and shaping by about 30%. I now have three of these bits with slightly different contours. I also have one of the Sears bits which has been gently reshaped and it is used for small boomerangs and competition airfoils.

If you would like further information about how I make boomerangs, please don't hesitate to contact me about visiting my two-car woodshop and I will be happy to teach you everything I know.



Trick Catch 101 - Dan Bower

Editor's Note: A question was asked on BoomerangTalk about Trick Catch fundamentals, and Dan's reply was exquisite!

==========

The single most important thing you need to do in trick catch is always try to have the boomerang coming towards you. No matter if it's hovering stable, rocking or spiraling you should always be in front of it so you have the best shot at catching it. Practice will make it easier for you to catch when you're off balance, on the run or generally in bad position, but you can't be good at trick catch until you learn how to set up right.

A few notes on the catches:

For Left and Right hand clean I find it works well to catch a little higher up then you might think, (try above or below eye level to start with, it's easier then if you're looking right across at the boom) that way if you bobble the catch you have a better shot at catching it on the rebound, whereas if you catch it lower, (say at the belt or below) the boom could hit the ground before you can attempt the catch again.

(BTW, there are no rules that say you can't make left or right hand clean Eagle style.)

Behind the back can be very tricky, the boom can go out of sight behind your shoulder as you watch it come in, so you have to be very sure where it's going so you can get your hands in the right place. You can use your shoulder as a guide point if you keep your hand in the right spot, just line up the booms flight path with your shoulder and let it come in. Try holding whichever hand you feed behind your back very still and use your free hand to clamp the boom onto the still hand, just snatching at it with both hands can cause you to slap it away from you; the same advice about holding one hand still and using the shoulder as a guide applies to one hand behind the back as well.

Under the leg can be done from either the outside in: putting your left hand under your left leg from the side of your body, or from the inside out; putting your right arm under your left leg from the inside of your body. (Any hand/leg/side combination you like is acceptable.) I prefer the inside out method because you have better range of movement with your arms and your body and other leg aren't in the way as the boom comes in. Again, just hold one hand still and use the other to clamp down on the boom.

Eagle catches can be done with the left or right hand. There are some people *cough* Eric Darnell *cough* who think that you should only do eagles with the hand you throw with because of the way the boom spins. I think this idea is good in theory, but complete bullpoo when applied in real life. I almost always make my Eagles left handed and have found that if I just think of the time Eric and Mark Weary gave me a 10 minute speech about not making eagles left handed I almost never miss. So my advice is to practice them with each hand and decide for yourself which one you're better with.

One hint is to not make the catch to high up, it's easier if you're looking down on the boom and can see it a bit better. Aim for the outside of the boom if you're using a 2-bladed rang so you catch it on one wing and aim for the center section on a 3 or 4 blader. (If your hands aren't large enough to fit around the center try aiming for a wing.)

Hackeys are possibly the catch you need to be the most precise on, mess up the hackey and there's not too much you can do. The hardest thing for me to learn was how hard to make your hackey. You can't lightly tap a boom and have it hackey well, you also can't just kick the heck out of it, there's a balance point you'll have to find for yourself with your booms.

There are several different ways to hackey, these are the ones I've seen the most: using your toe to make the hackey, it looks like you are punting a football; some people describe it as Kung-Fu style. I don't like that method at all, you have to hit the boom perfectly other wise it flies out far in front of, or behind you and sometimes off to the side. The next is where you set up so the boom comes in to your side and you hackey it on the outside of your foot like people will do while playing with hackey sacks. Some people use this method very well, Adam Rhuf is one example. I don't really like it because you aren't really in great position to catch once you make the hackey, you sometimes have to turn and set up again after the hackey and it's easy to boot your rang off to your side where you can't catch it. Finally, you have the method most competitors I've seen use. When you set up, keep the boom coming in roughly perpendicular towards your shoulders and wait until the boom is somewhere below your belt - where you can see the top of the boom. Aiming is like with Eagles, aim for the outside of the boom on a two-blader and the center on a 3 or 4 blader. To make the hackey kick to the opposite side of your

body, more or less from the knee, your hip will move a bit too, and "scoop" upwards with the inside of your foot. What this does is make it so your arms are in front of you, where you will be making the hackey and they have full 180° of motion in front of and to your sides. As long as you don't hackey the boom into the ground or way off, nowhere even close to you, there's a pretty good chance you'll make the catch.

Tunnels can be done from behind you or in front of you, it is basically an under the leg catch with both feet on the ground so the same advise applies. (BTW, there is nothing saying you can't do a regular under the leg catch with both feet on the ground if you want to.)

Foot catches are probably the most dropped catch. They are also 20% of your score, so it's important to practice them a lot. You need to make sure you are always downwind while setting up. Don't sit down to early, the timing is important and the best way to learn is to just practice. Once down on the ground I like to roll onto my side a bit so my feet are roughly parallel to the incoming path of the boom. Keep your bottom foot steady and use the top foot to clamp down when the boom is between your feet. Clamp forcefully, too light and the boom will just slide out from in-between your feet. If you break a boom don't sweat it, just make the catch and be sure to have a backup boom. Foot catches break a lot of booms, but as long as you have a piece in between your feet you get the points.

Daniel Bower
Seattle

Call for Nominations for the USBA Board of Directors

It's that time of year again! The USBA needs your nominations for all the USBA Board of Directors positions. You can even nominate yourself, if you feel that you should run for a BOD position. If you nominate someone else, you will of course need his or her consent and willingness to do so. The USBA Board of Directors consists of:

-President

-Vice President

-Treasurer

-Secretary

-Board Member-At-Large (5 members)

All nine positions are open to nominations. The USBA needs individuals with energy, creative ideas, and a desire to see the USBA grow and prosper. If you know someone with those qualities, please ask them to consider running for a position on the BOD, and submit your nomination.

All nominees will then need to draft and submit a statement of candidacy for the position desired. The deadline for nominations submissions is May 25, 2004 . Please send your nominations to Clay Dawson. (clayton.dawson@honeywell.com) Mailed submissions need to be postmarked on or before May 25 to be valid.

Thank you, USBA members, for your support and for continuing to make the USBA the best it can be!

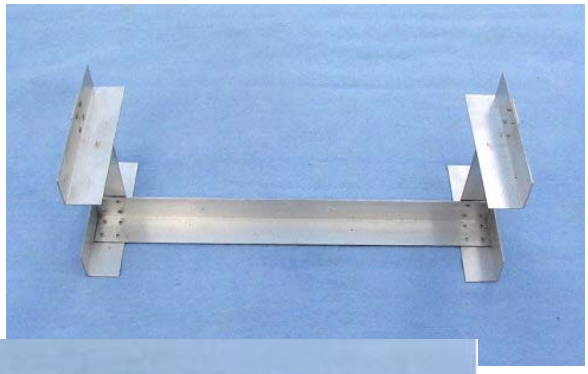
Plug Molding For The Beginner

- Jack Claycomb

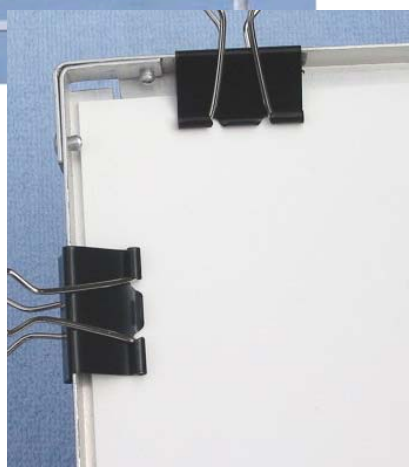
If you like to make boomerangs, as well throw them, then you may want to consider plug molding as a way to experiment with variations in shape and material properties. Plug molding is similar to vacuum forming but a vacuum is not required. With plug molding, a sheet of plastic is heated until it softens. It is then placed over a shape to be reproduced and it is forced to conform to that shape. The plastic cools and hardens and an embossed copy of the shape is formed. The shape is cut out, the edges are finished and you have made a boomerang.

A series of pictures helps describe the procedure.
A 4' X 8' sheet of plywood set on a couple of sawhorses serves as a temporary table for cutting a 4' X 8' sheet of plastic into 15 blanks that are 16" X 18 3/8".

When the plastic sheet is placed on the table, lines are drawn with a long straight edge for a power shear to follow. Power shears do not produce any plastic sawdust but circular saws and reciprocating saws have cut a lot of plastic on this table.



A frame made from ½" aluminum angle holds the plastic blank with 1 ¼" medium binder clips anchoring the edges. A support made from 1 ½" aluminum angle holds the frame up high enough so that the heated plastic can sag a bit without touching and sticking to anything in the oven. Aluminum foil under the support protects the heating coil in the oven. Like a lifesaver on a boat, it is nice to have it and you may never need it.

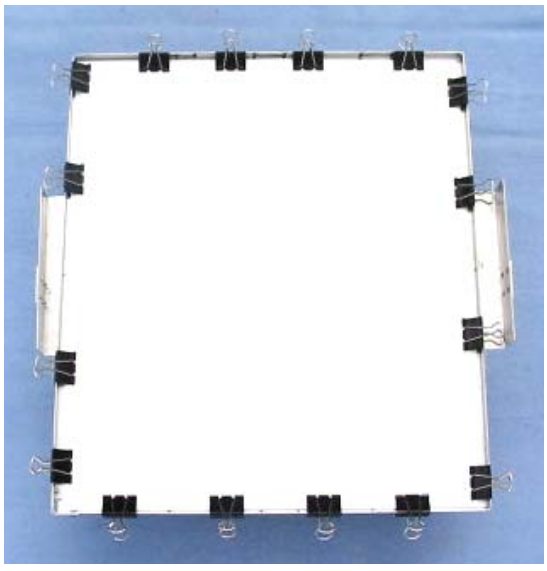


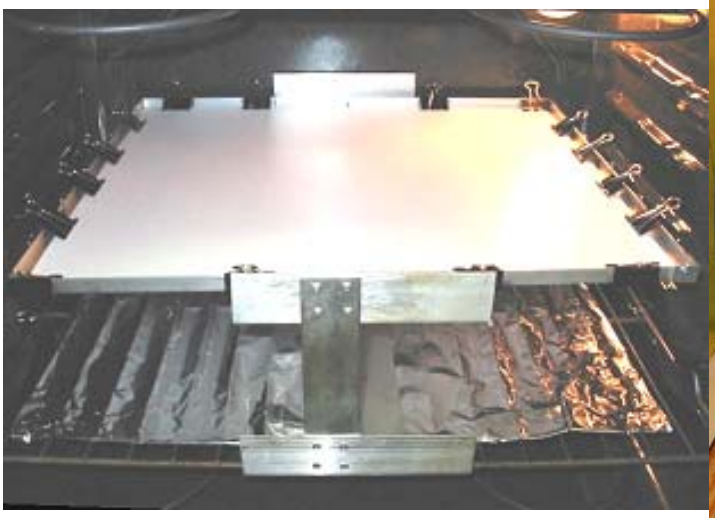
A timer that reads in minutes and seconds is essential. In this oven set at 375 degrees F the heating times and thickness table for high impact polystyrene are as follows:

THICKNESS inches	TIME (Min : Sec)
.125	4:00
.100	3:00
.080	2:30
.060	1:45
.040	1:20
.030	1:15
.020	0:55

These times may need adjusting as the oven slowly stabilizes.

When the timer says "pull it" the frame is pulled and rapidly positioned on the mold and the

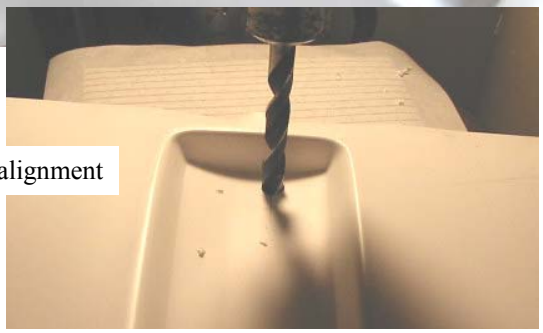




Heating and pressing the malleable material in the form

Positioning the die cutter

Right hand alignment



Left hand alignment

mold is closed. Leaning on the mold with your hands or forearms for half a minute or so will insure that the plastic completely conforms to the mold. Two degrees of dihedral is built into these molds but future molds should have adjustable dihedral and replaceable blades so that the curvature or airfoil can be varied without building a whole new mold. The metal pieces in the top of the mold are 1 ½" aluminum angle. When spacing gets tight it is easy to cut away portions of the angle.

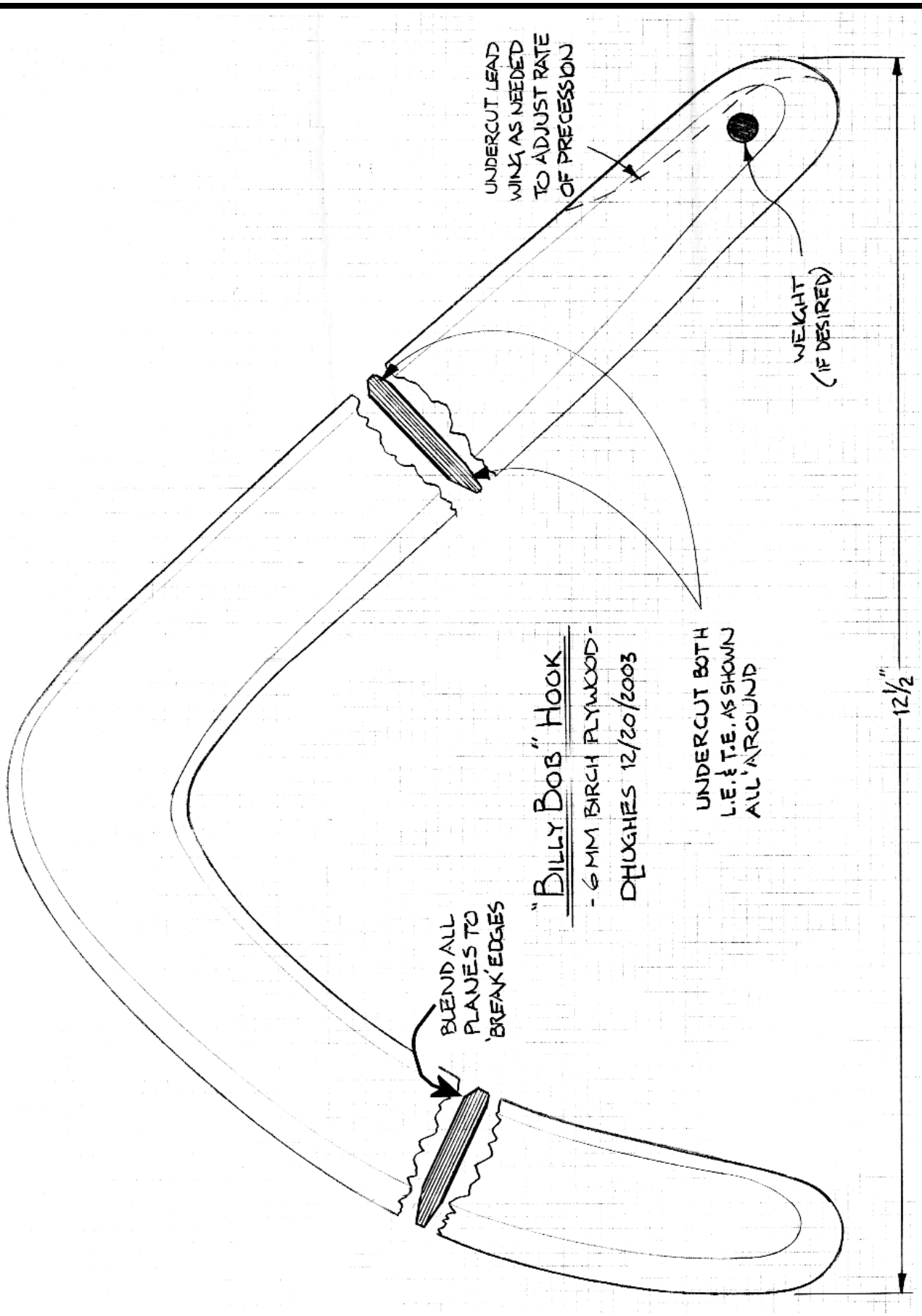
The pitch at the boomerang tips shown on the previous page is 5 degrees. The radius, R, of the top of the blade is 4 inches so a 5 degree pitch requires an offset of the blade centerline, X, of: X=R sin 5=.35 inches.

A die cutter and an arbor press are used to cut out 14"-80 boomerangs. A lot of boomerangs were made in this little area using the bandsaw before moving to the press and die cutters. You can get some production out of die cutters but only the bandsaw lets you use your imagination. The finished stack of Rangs went to Expo 03.

Dave Hughes is experimenting with one of his designs that he may us as a Trick Catch boom. (right) This is shown with his approval, thanks Dave! He is able to modify pitch, shape and dihedral. If he decides to try a different thickness then I'll heat up the oven.

It is OK if your imagination gets out and runs wild a little each day.

Jack Claycomb
Houston, TX


UNDERCUT LEAD WING AS NEEDED TO ADJUST RATE OF PRECESSION
WEIGHT (IF DESIRED)
"BILLY BOB" HOOK
- 6 MM BIRCH PLYWOOD -
D HUGHES 12/20/2003
UNDERCUT BOTH L.E. & T.E. AS SHOWN ALL 'AROUND
BLEND ALL PLANES TO 'BREAK' EDGES
12½"

The Doctor Discusses Veneer Booms
- Dr. Fred Malmburg

I recently put together some veneer boomerangs, and found out that a few others were interested in this type of work. What follows are the procedures I used in making these booms. It is highly recommended that only those who have air foiled simple plywood or plastic booms consider doing this work; it is somewhat more advanced than simply cutting out a boom shape and air foiling it.

First, you will need a few items to make these booms. The wood I used under the veneers was either 4mm or 5mm Finnish birch plywood; if you want to use just one, I'd go with the 5mm plywood. The veneer doesn't add too much to the thickness, even if you put it on both sides. Personally, I wouldn't skimp on the underlying wood; the strength of the final product depends upon what you use here.

Next, you'll need veneer. I got mine off of eBay. What I like about that is, you get to see not only some close-ups of what the veneer looks like, but they often lay out the entire amount being sold, in a pile or multiple piles, so you get some idea of what's being sold. It is sold in "square feet", and thickness varies a little depending upon what wood was cut, where it came from, who cut it, etc. They almost always list the thickness, but this shouldn't be a critical issue for us. Choose one that looks good, that you'd like to see on a boom. One more note - small purchases won't get you nearly as good a deal as medium to large size purchases. If you can afford a 70 sq. foot purchase, the "per sq. foot" price will be significantly less than it will for a 15 sq. foot purchase.

You will also need a veneer roller, although there are alternatives to this. If you have a vacuum bag set-up for clamping, this will work beautifully. It is also a lot more expensive than the $20 veneer roller is. You will also need contact cement; I used "DAP" "Weldwood", but have no experience with the others available. You will be very happy to have some of those cheapo brushes that are about 7 inches long, look like a roll of steel with about a ½ inch brush of some hair at the end. I've known these as "acid brushes" my whole life, but I'm sure there are other names for them. If you have none, they sell for about a quarter at most hardware stores. You will need a fairly heavy-duty scissors; a straight-edge (ruler); a pencil; some newspaper for covering your surface when you glue; and the rest of the tools you normally use for air foiling a plywood blank into a boomerang.

The first step in construction is determining the shape of the boom you desire. Let's assume it will be reasonably simple, a two-blader. Lay the shape out on the substrate (the underlying wood, let's assume it is 5mm plywood), and cut it out, very slightly bigger than desired. Now, grind it down almost to the final shape (within 1/64 of an inch or less, all around), so that you now essentially have what everyone calls a "blank". That is, a plywood boom shape without airfoils. The airfoils will come much later; leave it at the blank stage now.

4 Piece Construction: These paragraphs will be needed only if you are going to make a 4-piece veneer boom (two pieces per side). If you are making a boom with only one piece per side, skip to the next paragraph. These two parts will have to meet somewhere, probably near the elbow. I decided to keep the look the same as my lap joints, so I chose to use a vertical joint at the elbow. The choice is yours, but for most veneers, it will look best if the veneers "balance" left and right, and for most shapes, that means a vertical joint, but again, you get to choose. So, now, pick a point near the top of the elbow that you would like to be the joint line, and put a pencil dot there. Put another one near the inner elbow, top surface. I do this by eye, because if it doesn't look right to the eye now, it probably won't later. Take the straightedge; connect the two dots with a line from top of elbow, to bottom of elbow. You will want to duplicate this line on the bottom surface; if you have to run the line over the outer and inner edges to make it accurately, go ahead. I then mark each of the 4 blank parts as "TL", "TR", "BL", and "BR" (top left, etc.) Now, with these lines and markings in place, you can start to lay out the veneer pieces. Put the blank over the veneer; if the veneer varies, needless to say, you want the blank to cover some of the "good" veneer parts. If it has "grain" to it, you probably want the grain to run the long axis of the boom arm. Once you have it where you want it to be, trace around the boom with a pencil on the veneer. If graphite pencil isn't the right color to show up on the veneer, find something that will. Anyway, when you come to the "vertical" (or other) line, stop. You will want to make a small "tick", a line going away from the boom blank at a 90 degree angle. Do this both at the outer and inner elbow lines. When you then remove the blank, you connect these two "ticks" with a straight-edge, and if you did it properly, the straight line on the veneer will exactly match the straight line on the blank you drew. You can see why it doesn't matter whether the line is vertical or not; it will be duplicated in the veneer, no matter what the angle involved. Oh, one final part here - make sure you mark, in pencil, on the veneer, the corresponding part designation ("TL", etc). You mark on the veneer the side that was facing it when you traced it. For example, if "TR" is facing you as you trace a boom arm, "BL" is actually facing downwards, and that is what should be on the veneer piece. This penciled designation will be glued down to the substrate, so you won't have to erase it. I put it near the elbow line, so it's easy to find which veneer piece is which fairly quickly.

When you cut out the veneer, you can use a fairly heavy-duty scissors. Kind of like the old time sewing or upholstery scissors. I cut it out about 3/8 of an inch out from the line, all around the shape, because as you cut this veneer, it

will sometimes want to "rip". Not fun. Make your cuts shorter (cut less veneer with each snip) when you see it trying to tear other than along the line you intended to cut. I cut outside the line everywhere EXCEPT for the line at the center, where it meets the other piece of veneer on the boom (for me, the "vertical line"). That, I cut RIGHT ALONG the line, so that the pencil line disappears, but just barely. Just completely remove the line. This will allow the two pieces to meet reasonably well, during glue-up. Now you know why we used a straight-edge to lay out both the line on the boom, and these lines on the veneer pieces.

2 Piece Construction: For booms with just one piece of veneer per side of the boom. Much simpler, but much more waste of veneer. Just lay the boom on the veneer, trace around it. Cut it out 3/8 of an inch outside the line.

Glue-up: fairly simple. For 2 piece construction, apply contact cement with acid brush to appropriate sides of veneer and to both sides of plywood; let set for about 12-15 min.; line up with blank (actually, I let the veneer lay still, and I place the blank on top of the veneer; easier to see this way). I then apply the veneer to the second side. Then, I roll the veneer down. By "rolling", I mean putting the boom/veneer on a solid surface, about waist high, and putting the roller on top of it, bearing down with a lot of your weight on the roller, and slowly rolling it over the surface, driving the mating surfaces together. Sorry, Gary; no divorce allowed here. For 4 piece construction: apply cement as above, to all 4 pieces of veneer and to both sides of the plywood. Actually, it is much easier to do this one half at a time; apply it to the "top" side first, get that completed, and then do the "bottom". When you apply the veneer to the plywood, make sure the "vertical line" matches exactly right down the line you drew on the plywood, easily visible through the cement. The other half should then meet this line exactly, too, and your joint should be as good as your ability to cut that line earlier. If doing one side at a time, as recommended, I'd roll it down well first, then do the bottom side afterwards. When the bottom is then done, the same way, then you roll that side, too. For both 2 and 4 piece booms, let them set overnight, to dry completely. If there are any "bubbles", any areas where there appears to be "non-contact" of the veneer to the substrate, then try to roll it down again. If this doesn't work, apply a spring clamp to the area as it dries overnight. Make sure you coat completely the substrate and veneer with contact cement, so that no bubbles can be attributed to a lack of cement. Reasonably thinly, but completely covered.

One important note - the instructions tell you to wait until the cement dries until it is "somewhat tacky". But, "if it is completely dry, re-coat with cement, and then put surfaces together". Do NOT do this. Your veneer surface will feel drier than the plywood will; if it bothers you, put a little more on the veneer than on the plywood, but do NOT re-coat. Every time we did this, it created "bubbles" that had to be clamped. Even the "dry" feeling veneers will clamp well, if applied somewhere around 12 minutes.

For both types of construction, wait until dry (at least 12 hours, 24 recommended); then, grind down that excess 3/8 inch all around the booms where there is veneer but no plywood. Eventually, you'll have a blank again, and you should know what to do with that. I'd suggest making the airfoils minimal at first, because most of these shapes I've tried seem to fly pretty easily with an airfoil less than I'd have guessed. Don't forget, if you can reduce the amount of the airfoils on these models, the better, because the airfoils are the only areas not covered with veneer. Usually, the entire undersurface, and over 90% of the upper surface will be covered with veneer.

If you see a very small amount of plywood showing through the joint, many times the glue underlying there is still active, and, as you sand the boom (esp the top surface with fine sandpaper; maybe 250-350 grit), the sawdust will fall in there, and will mask this area somewhat. Obviously, the smaller the gap, the better. Another problem that occurs (Dave Hendricks noted this, and I had seen it once before on another boom) is that most booms swell a little at the elbow. In other words, as you move from the tip of a wing to the elbow, you have a section with a wide thickness (chord); then it narrows as it approaches the elbow; then, enlarges just a little at the elbow. Think of a big snake; big body, small neck, big head. This area, where the veneer swells out again at the elbow (this translates into the "area at the inner elbow") has some short grain, and can chip out easily. Be careful of that area; veneer can break if you sneeze hard on it. I haven't tried reinforcing this with CA or Wood Hardener yet, but that may be an option.

While I haven't tried it, with some veneers that come in larger, square or rectangular sizes, it might save veneer to simply apply large sheets to a substrate, then lay out the booms and cut them out. You will have less overall waste of veneer doing it this way, but will have "chance" determining where the figure falls on your boomerangs. You would also need to have a great stacking boomerang, which are often the least attractive shapes to collectors. It's something to consider, anyway. Veneers that are only six inches wide, or ones that have significant "grain" direction, won't work with this method. In fact, of the 4 veneers I chose to start with, only the "mappa burl" comes in sizes worth considering trying this method.

I found a source for a veneer roller in a catalog from "Woodworker's Supply". It can be found on-line at www.woodworker.com. If you go through the on-line access, use the term "veneer roller" in their search engine, and the two models will appear together in one picture, if you scroll down just a little. Their phone number is 1-800-645-9292. They also sell veneers, but you can do better on price and quality by going through eBay.

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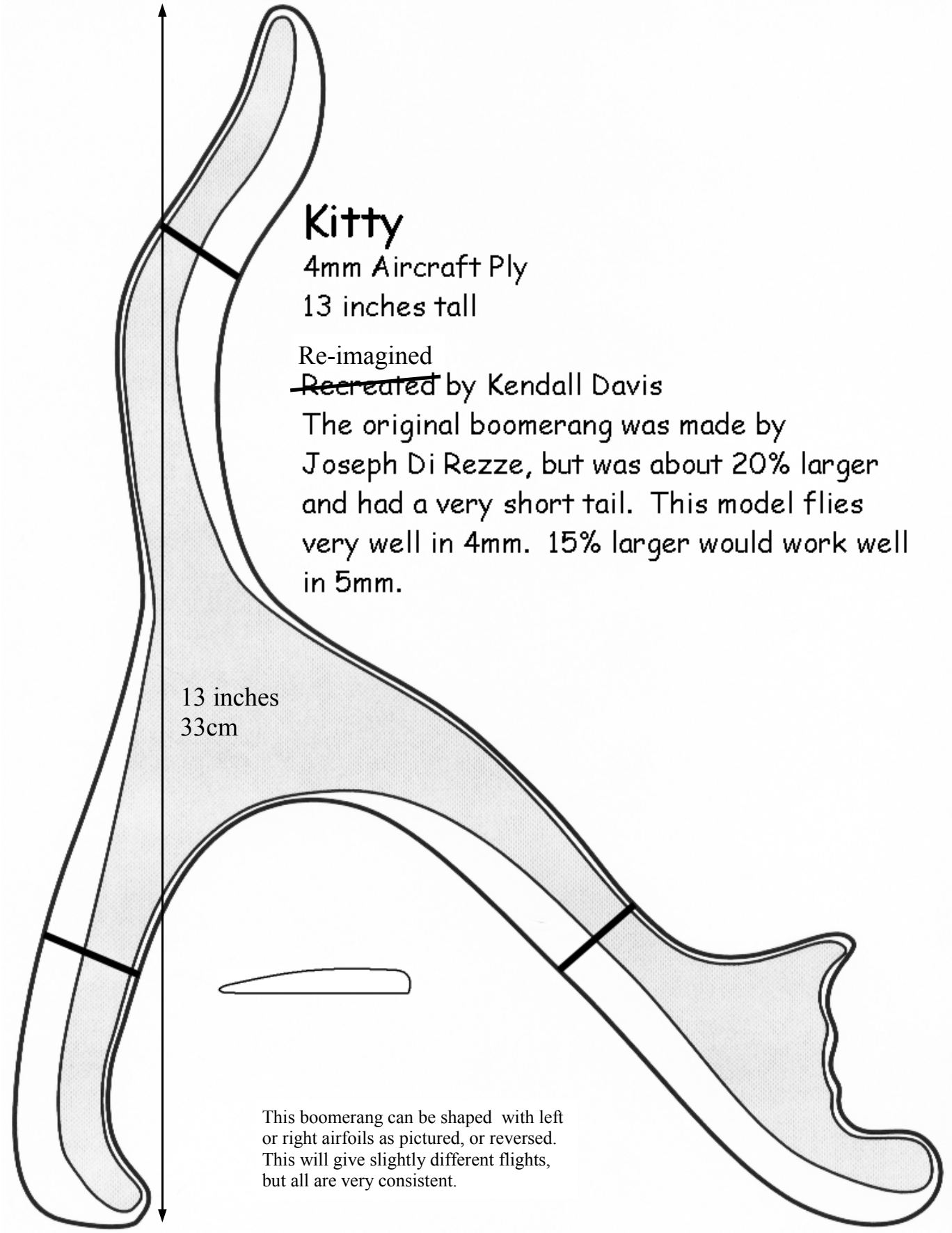
Dr. Fred lives in York, PA and specializes in exotic wood boomerangs!


Kitty
4mm Aircraft Ply
13 inches tall
Re-imagined
~~Recreated~~ by Kendall Davis
The original boomerang was made by Joseph Di Rezze, but was about 20% larger and had a very short tail. This model flies very well in 4mm. 15% larger would work well in 5mm.
13 inches
33cm
This boomerang can be shaped with left or right airfoils as pictured, or reversed. This will give slightly different flights, but all are very consistent.

(Continued from page 7) *10 questions*

do you see as the best young players these days?

Ted:

It has been several years since I have been to an official USBA tournament. I have gone to many Michigan tournaments over the past 12 years. These tournaments are usually not as regimented as official USBA events. Few throwers have a strong desire to be on an international team or be declared a National champion. The events are often selected by the throwers at the time of the tournament and are based on the experience level of the throwers as well as the weather conditions. We will do older events such as MTA unlimited and Juggling. We also toss a lot of throw sticks at targets or for long distance. Every year, we do a Turkey Toss. This sometimes includes a Turkey Piñata full of candy for the children. We have also loosely merged with the Michigan Atlatl Association and some of our tournaments combine atlatls (spear throwers), throwsticks and boomerangs. We sure have a lot of fun at these informal events. If there was a USBA tournament within an easy driving distance of Ann Arbor, I would surely attend to see old friends and maybe even throw.

However, I don't have time to participate in any of the online boomerang chat sites and nobody sends me any email notifications of pending events, so I usually don't hear about tournaments until after they are over and written up in MHR.

As for the best younger throwers, I know that Adam Ruhf is pretty good, but there are a lot of grey beards still on the teams and unless the USA makes a strong effort to bring in and effectively train young throwers, then arthritis and osteoporosis will eventually render the USA International Teams totally ineffective. Larry Ruhf has done a wonderful job training Adam and John Flynn is doing the same with his twins, but this is not enough. There are other enthusiastic young throwers out there who have good potential for future teams. Scott McMillan is one example. He goes to all the tournaments in New England. I would really like to see the experienced throwers adopt young throwers like Scott and really train them for teams that the USA will be needed 5-10 years in the future.

Question #8:

Do you have any young boomerang protégées currently under your wing?

Ted:

Sorry, but I haven't been doing too much throwing over the past couple of years. I do make the rounds by doing free demos at schools, scouts, etc. when people request my services. This is a lot of fun, but I haven't had the opportunity to work with a small dedicated group of children as I have done in the past. I have put a lot of time into training Toby Dog to catch boomerangs. Toby is a Black Lab who lives about a mile from my home. Over the past 10 years, Toby has caught boomerangs thrown by some of the world's greatest throwers: Rusty Harding, Max Hoeben, Volker Behrens, Roger Perry, Gregg Snouffer and other boomerang throwing visitors to the Ann Arbor area. I like working with dogs almost as much as I like working with children.

Question #9:

Do you think the USBA is doing what it should to promote the sport and bring it more into the public eye? What could we do better to get more young folks interested, and ensure continued growth of this hobby/sport/art/science?

Ted:

I think the the USBA puts too much emphasis on promoting competition and does not use available resources appropriately to grow the membership to where it needs to be. This is reflected by the fact that the membership is substantially lower than it was 20 years ago and most of the membership is made up of individuals with competition as their primary interest. When I was Secretary (and President) of the USBA 15-20 years ago, the USBA had more than 500 members. There was a healthy mix of competitors AND people who liked to throw for the fun of it. There were scientists who exchanged ideas on scientific fundamentals, computer programs, etc. There were collectors who wrote articles about the history of the sport and shared their knowledge about Aboriginal artifacts, techniques, etc. Many of the members made and exchanged finely crafted or painted homemade boomerangs. MHR was a valuable resource back in the 1980s. Competition articles were kept to a minimum and the issues had more articles on science, computer programming, wood working, history, manufacturing, poetry, humorous stories, etc. People saved MHR as a reference. I do not save issues of MHR that are made up mostly of tournament results. Advertisement revenues were good 15 years ago because there were a lot of new readers who would order boomerang products that were advertised. Nobody wants to advertise in a publication with a low mem-

(Continued on page 22)

bership and when most of the readers make their own stuff.

In the early days, the USBA membership was much higher because efforts were made to promote sports throwing through the media, scouting groups, schools and commercial tie-ins with manufacturers (like Wham-O, Lands End) etc. The vast majority of potential new members are intimidated by the thought of having to compete at tournaments, especially in events like Fast Catch and MTA. There are just too many people out there who just want to learn how to throw a sports boomerang, learn how boomerangs work for a school report, and maybe make a simple sports boomerang for their own use. A small percentage of these potential new members may become competitors later, but most newbies are turned off by the thought that joining the USBA means that they need to compete in special events. Look how many people like to play tennis or golf, and few are compelled to enter national competition when they are first introduced to those sports. The USBA needs to look at other sports that have large memberships and mimic what it takes to build and keep a large membership.

The USBA does not use email resources effectively. I almost never get email notifications letting me know about upcoming events. Instead, USBA members are expected to participate daily in a chat room discussion to get their information. I do not participate in chat rooms because they are too time consuming.

There are some things that the USBA has done that are very good. I like the newer EXPO concept better than that of a National Championship. However, I think that a stand alone national championship is still needed and the Expo idea needs to be expanded to regional Expos. There should be many smaller EXPOs throughout the USA and a strong effort must be made to get lots of new people to go to these mini-EXPOs.

The Toss Across America is the best idea that I have ever seen come out of the USBA for promoting the sport. Betsylew deserves a big star for thinking this one up. Unfortunately, older ideas slowly die out and something needs to be done to revitalize the TAA. Perhaps the TAA should be done all year long and members should be encouraged to do them in association with their school, scouting group, business outing, etc.

Because I retail boomerangs and keep in touch with lots of boomerang people, I have many thousands of throwers in my database. The USBA used to email me notices about local tournaments, events, etc. in advance with a request that I send an email notice out to everyone in my database who lives within a targeted region. This was a very effective way to bring in new potential members because many of my newer customers were not members of the USBA and they were given the opportunity to visit a tournament that was within an easy driving distance of home and see the sport for themselves. The USBA stopped sending me these requests several years ago, so the USBA has lost a valuable resource for bringing in new members. I also used to provide printed mailing labels to the USBA to do promotional mailings. The USBA has not requested my mailing labels for many years.

Other ideas for bringing in new members include: (1) sending promotional flyers to retailers like myself to include in every package that gets shipped out ; (2) ask retailers (like myself) to add a USBA membership to their catalog so that when somebody buys boomerang products, then they can simply pay for a membership at the same time. This is especially of value to overseas throwers. If the USBA really wants to bring in new members, try offering a discount to first time new members so they can try out MHR and see how they like it (3) Exchange membership lists with other organizations or hold dual events. There are a lot of kite flyers and flying disk throwers who are obviously good choices as potential new boomerang throwers. In Michigan, the boomerang throwers and atlatl throwers hold dual events. The boomerang throwers learn to throw atlatls and the atlatl throwers learn to throw boomerangs and throwsticks. We have also done joint events with local kite groups. ; (4) Try advertising a membership in a magazine that caters to a related sport, like kites or disc golf. Another idea is to exchange ads with those magazines ; (5) Develop and market a publication or video (VCD or DVD is best) that can be given out (or sold at the cost of production) that has information about the sport (minimize competition and promote sports throwing, science, woodworking, history etc.) and let people know what they will get when they join the USBA. Perhaps this could be paid for by retailers who would have their retail information included with the VCD or DVD). I am sure that there are lots of other clever ways to boost membership and make the USBA an organization that truly fosters ALL ASPECTS of the sport of boomerang throwing. To do this, you really need to have members who have a strong interest in sports throwing, history, science, woodworking, etc. and have them promote their specialty.

The USBA also needs to (1) bring back the USBA store, (2) make promotional patches, T-shirts, stickers, etc., (3) maintain a central mailing address that doesn't change every year or two, (4) be responsive to people who write, (5) send a newsletter and membership card immediately upon receipt of payment for a new membership, (6) survey members who do not renew their membership and find out why and then take corrective actions, (7) Offer newsletter exchanges with other clubs. I was the editor of MHR for many years. I maintained a newsletter exchange program with organizations from all over the world. We exchanged the best material for publication and this enriched every issue, (8) Offer an exchange of memberships between the USBA and other international

organizations. There are a lot of USBA members who would love to also receive newsletters from other countries. However, the cost and hassle of sending separate payments overseas limits this. If each organization collected payments for the other organizations and exchanged payments once or twice a year, then there would be a cross-pollination that would benefit all organizations that participate in the exchange.

Question #10:

What do you see as the "rank & file" member 's role in improving, updating, changing, and perpetuating the USBA into the future? What can each member do to make the USBA the best that it can be?

Ted:

I think that it is important to avoid putting too much pressure on the casual or new thrower to promote USBA memberships. The majority of the new members just want to read a newsletter with information on how to make and throw boomerangs. It is important that the USBA identify and cultivate a special group of more enthusiastic throwers who have the time, energy and resources to do an effective job at promoting the organization. An example of this is Gary Broadbent who makes a living going around to schools and doing demos to thousands of students weekly. If Gary gave out handouts to each of the thousands of students that he teaches each week, then Gary could bring in more members by himself than all other members combined. Even if only 1 percent of the students responded, the USBA membership could be doubled in a very short period of time. Do any of the members have connections with other organizations (Chet is/was a board member of the USA kite flyer's organization) or a member of the media or have marketing skills/ resources, etc. If so, then these members need to step forward and volunteer their help.

Membership drives have been held in the past and this is a good idea that should be continued. Some members could donate boomerangs and then the USBA can offer these boomerangs as prizes to existing members who bring in the most new members.

Encourage existing members to give a new membership as a Christmas or birthday gift to someone that they teach to throw.

Encourage members to have their school or library subscribe to MHR (offer a discount?).

Have members who retail boomerangs offer a USBA membership, bundled with a boomerang product.

But the most important thing that the USBA and its membership needs to do is to add value to the membership. If not, then new members will not stick around. New members do not want to read box scores about how people that they do not know did in a tournament that they did not attend. The newsletter must have real value. Members who have knowledge or skills that would be of interest to other members need to write articles and submit them to the editor for publication. The editor is just an editor. You cannot expect the editor to also be the author of wonderful articles in each issue. The editor needs members to submit new and useful material and this information should squeeze out the competition box scores whenever possible. If someone is not a good writer, then they should submit the article anyway and the USBA can use other members with good technical writing skills to polish up the articles before they are published. I am a technical editor for an Engineering journal and I rewrite many articles each year before they are published. This is a resource that I can offer to the USBA if this kind of help is needed.

Each member needs to think about what skills they can offer to help the USBA. These skills should not be throwing skills, but administrative or technical skills. The USBA board needs to build a network out of these special skills and build a strong and effective organization. When I was President of the USBA (1986), I formulated a strong and effective board of directors. Each board member had special skills. I discouraged members from running for the board just because they were good throwers. Betsylew offered legal services, John Flynn offered financial services. Calley Laurent ran a wonderful store. Gary Lamothe ran an effective video archive system. Chet Snouffer handled international and media contacts. Carmen Snouffer maintained valuable hard copy resources and proved to be a wonderful follow-up President after I stepped down from that office. Other non-board members had special roles. Doug DuFresne took the role of formulating new and effective competition rules. I worked on the development of an effective rating system. John Koehler and Paul Sprague did a wonderful job publishing MHR, and there were many others who helped in other areas as well. The USBA thrived. The membership grew and the USBA was in the best shape ever. It was a lot of fun working with a large number of really enthusiastic people who enjoyed their volunteer work because their role was closely matched to their natural aptitudes. Therefore, if you are a USBA member and you have had the patience to read through this entire dialogue, then think about what skills you can offer and let someone on the board know how you can help. I promise that when you become involved, it will be a lot of fun and the USBA will benefit immensely.

United States Boomerang Association

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Visit us Online at www.USBA.org

Boomerangs Are Coming Back!

Klingspor Online Catalog offers a 10% discount to USBA Members.

The Klingspor online catalog has offered to give a 10% discount to all USBA members. If you are interested in getting a discount on some of the best woodworking, sanding and finishing products, please send your name, address, and e-mail to Clay Dawson. (Clayton.Dawson@Honewwell.com) These names will then be added to the database so you can go online at www.woodworkingshop.com for savings on woodworking tools and materials. You MUST submit your information to receive the 10% discount on the website.

USBA Calendar of Events

April 17: 5th Annual Southeastern Classic Boomerang Tournament - Atlanta, Georgia
Location: Al Bishop Softball Complex, 1082 Al Bishop Drive, Marietta, GA 30008 Jason Smucker 770-565-7256

May 1-2: Arizona Tourney
North of Tucson in the town of Marana, AZ.
Marana Middle School
Contact Don Monroe (Monroe5@comcast.com) for more details

May 22: 14th Annual USBA Toss Across America
Boomerang Teaching and Exhibition Event - your chance to get involved to promote our sport. Host a Toss event in your neighborhood!
Contact Betsylew Miale-Gix (betwil@att.net) for additional information and materials.

Memorial Day Weekend May 29-31 Missouri Duals / Gateway Classic Held in O'Fallon, IL at the high school - 600 S. Smiley Street. Saturday will be the marking of the field, then the Missouri Duals followed by carbo-loading at the Schlafly Tap Room in downtown St. Louis. The Gateway Classic starts *promptly* at 9:00 AM on Sunday morning. For more info, contact Spike Fraiser (Acdboom@aol.com)

June 26: 9th Annual Greater Seattle Open Boomerang Tournament!
Where: Dahl Field, Seattle, Registration starts at 8:00. First event: 8:30 AM Betsylew R. Miale-Gix (betwil@att.net)

July ?? Fifth Annual Vermont Boomerang Tournament
http://www.vermontboomerang.org/Annual/Annual.htm
Paul Gustafson - 802-864-3212

To list your event please email MHREditor@usba.org