



Many Happy Returns

Nos. 24 & 25

A Quarterly Newsletter of the U.S. Boomerang Association

Fall - Winter 1985

Atlanta Hosting Nationals June 6-8

The host Atlanta Boomerang Society has chosen dates, June 6-8, and a site, the Atlanta Falcons' football training complex, for the fifth annual United States Boomerang Tournament in 1986. Put the weekend down in your calendar now and plan to attend this fling, held in the South for the first time.

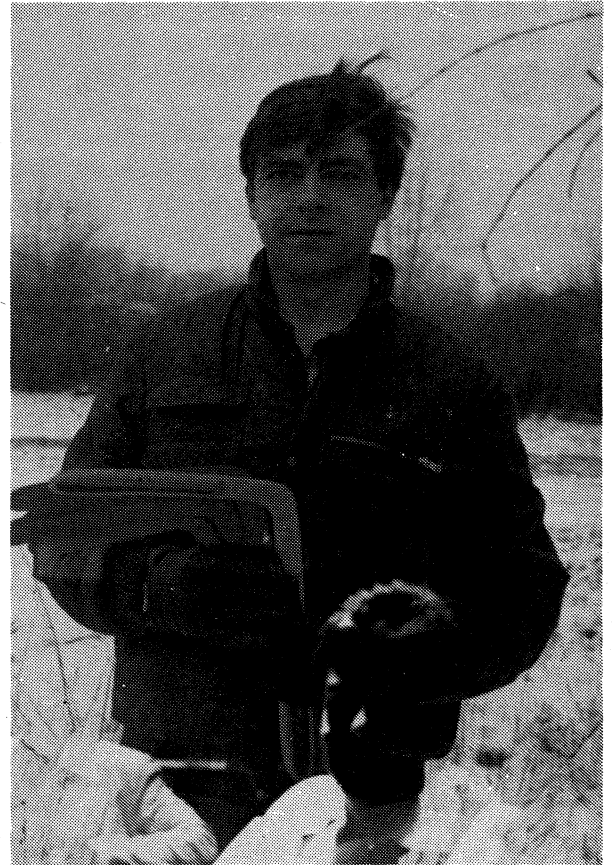
As planned by Dr. Brent Russell, president of the Atlanta group, and his colleagues, vice president Dave Philpott, also a USBA board member, secretary Jim Hooker, and treasurer Phillip West, the nationals will closely emulate the highly successful '85 throw at Northridge, CA. There will be a Friday afternoon registration, night gathering with reception, lectures, fund raising auction, and design contest. On Saturday there will be the annual meeting, demonstrations, competitions, dinner, swim, and night throw, and on Sunday, competition and awards banquet. Films of boomerang throwing will be shown, a trading and sales area established, and of course there will be lots of practice throwing all three days. A detailed schedule of events will be printed in the next issue of this newsletter.

The Falcons' complex constitutes three football fields, an adjacent Falcons Inn where accommodations for USBA members will be available at an excellent price, and other amenities. The site is easily reached via Interstate 85, 15 miles north of Interstate 258. The route from Atlanta's airport, Hartsfield International, is not complicated.

The Atlanta Boomerang Society, some 100 members strong, was able to obtain the Falcons site because of the enthusiasm for the sport of boomerang-throwing by Don Walraven, nephew of Rankin Smith, owner of the football team. Thanks go to both for making arrangements possible.

So what to do between now and then in addition to making arrangements to attend? Practice up, put aside boomerangs and boomerang paraphernalia to donate to the USBA auction, manufacture (if making 'rangs is an

interest) a particularly choice stick or two for the design contest, and spread the word about the nationals generally. See you there. •



Practicing What He Preaches

Ace MTA theorist and boomerang maker Ted Bailey, an aerospace engineer with Teledyne in Toledo, had a one-hour Saturday morning throw Nov. 23 such as enthusiasts dream of. It left him levitating with pleasure. This is what he pulled off: four flights, with



catches, of more than 1 minute, and one throw of 2 minutes 13 seconds with catch, an unofficial world record. (The tournament mark is 1 minute 2 seconds by Mike Forrester of Wheaton, MD.) Out on a big field at 10 a.m. just as migrating geese were taking off to take advantage of favorable winds, Ted used his technique of waiting through a period of calm until he saw a gust stirring leaves in the distance. Then he would launch to get the boomerang high up and autorotating just as the wind arrived so that the boomerang could take advantage of the lateral winds to generate lift. Get the concept? The day was cold, in the 30's. After his four great flights, Ted launched a screamer that went up to 75 feet, began a perfect hover, and then was struck by gusty winds. The 'rang drifted down wind, climbing to a maximum altitude of 150 feet, with Ted jogging underneath. At one point he came to a frozen-over creek and had to wade it, getting wet to his thighs. About a quarter of a mile downwind, the rang arrived at a parking lot and ticked a tree bordering the lot. This caused it to loose spin and drop down into Ted's waiting hands for an easy catch. Clocking himself with a technique he estimates to be accurate to 1 second ---"easily," says Ted, a precise man---he turned to the only two witnesses, two electrical service men in a truck, and got them to sign certifications. Then he took the 'rang home and put it in his personal boomerang museum and started calling up friends across the country to exult. "It was like catching a really big fish," he said. "Forrester doesn't stand a chance in hell with me anymore. Now, I want to do one minute every single time I throw."

The magic 'rang? Just one of many made by Ted and sitting in his throwing kit. It didn't even have a name or number. The boomerang was what might be described as a "midi," that is of medium size---24 inches from wingtip to wingtip. A final note of interest to those who haven't seen Ted in action. He's a leftie who throws right-handed boomerangs, simulating a right-hander's throw! Why? As he explains it, when he got started in boomerangs and didn't know how to make them, all he could find was right-handed models, and he learned to throw them. So successfully, as it turned out, he has never switched over to the more natural and for him potentially more powerful leftie toss. With Ted's brain, who needs brawn! •

The Tournament Circuit

So many boomerang tournaments are going on around the country now, big and little ones, well organized throws and rather casual tosses, that it is impossible, even if desired, to give detailed reports on them. What follows are highlights from selected tournaments, with the amount of detail provided often reflecting directly whether the editor of this publication attended or whether his correspondents across the nation were faithful:

Eastern Pennsylvania Open

How does a world record get set? It takes a good boomerang, good arm and throw, and often a bit of luck. Mike Forrester combined all of these elements to break his old MTA mark with a 1 minute-2.38 second clocking at Northridge Community College in Allentown. After scoring clockings of 37 and 34 seconds, he launched a third throw in a high wind and it got up high in the air, at least 120 feet up. "Awesome," said his throwing buddy, Ron Tamblyn. Hitting a thermal, the boomerang rode downwind for some 45 seconds right at the 70 foot level. The wind had abated to the 10 mph level, and this permitted Forrester to track his stick as it drifted. Finally about 225 yards downwind, the boomerang came down in a flat hover and Forrester negotiated an easy catch, to break his year old record of 50.8 by more than 10 seconds. The boomerang he used, named Stratus, was 24 inches from tip to tip, made of stiff birch plywood, and weighed just 3 ounces. Not even fine sanded, the 'rang did have the right twist to it. "Warp is everything in MTA," says Forrester. In another feature of the day, Ron Tamblyn got off a distance throw right at Peter Ruhf's Guinness world record level of 125 yards outward. Because Tamblyn uncorked the throw with the field judges standing far short, an exact measurement was impossible to arrive at and the final award of the judges was well under the distance many estimated it traveled, before returning perfectly over Tamblyn's head. "I could have caught it if I wanted to," he said. The boomerang, a weighted aluminum model, was on loan from Gary Broadbent, who had journeyed all the way from Cleveland for the throw. Broadbent, among the most enthusiastic of all throwers, came well equipped. He had an estimated 200

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Editorial contributions; We are always looking for editorial material in the form of articles, black and white photographs and art work. Be sure to keep a copy of your material. Anything you want returned should be accompanied by a self addressed stamped envelope. Submissions should be made to: Ben Ruhe, 1882 Columbia Road N. W., Washington, DC 20009. *MANY HAPPY RETURNS* is produced by an all volunteer effort: contributions are not paid.

boomerangs in his car. Winners over-all were George Reitbauer in first place, Broadbent in second and Tamblyn in third.

Amherst Open

In addition to John Flynn's two world records in Fast-Catch (18.74 seconds) and 5-Minute Fast Catch (59) reported in the last issue of this newsletter, Dr. Larry Ruhf's annual corroboree produced some other hot performances: a 43.55 second MTA catch by Peter Ruhf (who dropped a 54 second one), an over-all win by Barney Ruhe who managed to top the field although he didn't take a single first place (he did rack up five seconds and one third, however), and some marvelous ensemble throwing in the Endurance event won by John Flynn when seven others tied or cracked Eric Darnell's former world record mark of 42 set in Paris last summer. Team competitions were another highlight of the day.

Long Island Invitational

Another annual event, Holly English-Payne's seventh annual throw at the grandiose Old Westbury Polo Field, drew a big turnout, some good throwing and catching, and--right at dark--another world record performance by John Flynn as he again took 59 catches in Endurance to tie his record set several weeks before. Flynn had three drops. The velocity of Flynn's 'rang, the accuracy with which it rockets back at chest level, and Flynn's fluid catching and throwing have to be seen to be believed. Jacques Sotty, a French wind-surfing champion who had just come from India where he wind-surfed 700 miles down the Ganges, avoiding floating corpses en route, was one doubter. Flynn obliged by doing a demonstration Fast-Catch for him, timed by the author of this newsletter. The clocking? Five catches in 19.7 seconds, one second off his world mark. Sotty was a convert. One throw and catch was timed at 2.7 seconds, this with the boomerang going out more than 20 meters in distance. For the tournament as a whole, Mike Forrester took first over-all followed by Dennis Joyce, who came north with with a Norfolk area contingent, and Flynn. At an after tournament party at a health club, featuring a whirlpool bath for tired athletes and a lot of Aussie beer to further restore their spirits, Holly and husband Jim McLaughlin outdid themselves with a home-cooked banquet and a prize table so richly laden everyone, and there was a crowd, took home two prizes, ranging from collector's boomerangs through books on Australian Aborigines. Former USBA president Carl Naylor made one of his infrequent tournament appearances but showed in the throwing that he retained the old touch.

Washington Night Jam

In the first night head-to-head team tournament ever held, four 4-man teams went at it on the National Mall and pioneered a form of competition that might be the wave of the future. Night-throwing is not only poetic but practical: little or no wind, no tourists, no pesky little kids and dogs, no righteous police, no problems finding a field, etc. Eight events were run off in less than two hours by Ben Ruhe, serving as tournament organizer in the absence of an ill John Mauro, and the players got so much throwing their tongues were hanging out. The events included Accuracy, Position, Endurance, Relay, Consecutive Catch, and Shambles. Although Washington's Kite Site captained by Chuch Bernstein took most first places, Lebanon Bologna down from Eastern Pennsylvania and led by George Reitbauer proved the most consistant squad and took first over-all. Note that the throw was run off with just one official, Ruhe, and two combination timers and scorekeepers. How was this accomplished? Two examples: In Endurance, two teams went out and threw simultaneously, with members of the other two teams acting as counters; the teams then reversed roles. In Accuracy, players from each of the four teams took a Cyalume lighted plate out into the field and all four launched simultaneously. The 'rang that came back closest to the plate won the winning thrower's team a point. The throw was then repeated. Most of the events were conducted thus, with simultaneous launches speeding things up enormously and with players acting as judges when not throwing, to cut down on the judging burden. As for boomerangs going out far enough, Ruhe announced that any player finding that another player's 'rang didn't make the distance (20 meters for most events, 40 meters for Aussie Round) could challenge and there would be an immediate test throw of the boomerang in question. There were no challenges. At a roaring party downtown after the match, the assembled players and spectators agreed that team play added a lot of fun to the sport. Other boomerangers around the world are hereby urged to give this throwing a try.

Delaware, Ohio

World champ Chet Snoffer cleaned up in his own Free Throwers' tournament with firsts in Accuracy, Aussie Round, Juggling (61 catches), Doubling and Fast-Catch and a second in Consecutive Catch. Ted Bailey took second over-all with a first in MTA (28.04 seconds) and two seconds, two thirds and a fourth. Greg Snouffer, Chet's younger brother, and Gary Broadbent took third and fourth, respectively. The August

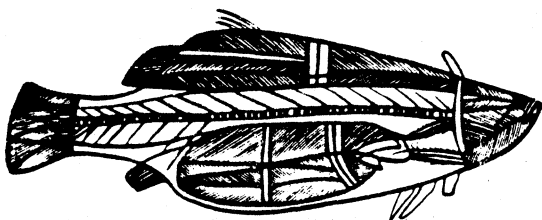
weather was perfect: light winds and partly sunny skies. A sound system provided great tournament control, nice music between events, and a perfect accompaniment to Freestyle where Red Whittington pulled off some of his twirling, whirling catches. Greg Snouffer, a gymnast, pioneered the fanciest Freestyle catch yet---a grab in mid-air while doing a standing back flip. Novice throwers competed too, with Elliott King taking first, Jeff Lahr second, and Kippy Rleser third.

Swainsboro Corrobboree

Aided by a \$50 USBA grant it used to print and mail an information packet and to design and print certificates for winners, the new South Georgia Boomerang Club held its first invitational fling in Swainsboro. Four Jackson-ville visitors showed the home club how to toss by sweeping the first four places. Gary Nichols took first, followed by Jesse Robertson, Richard Witt, and Jeff Witt. Jim Hooker and Dave Philpott of the Atlanta gang took fifth and sixth and James Doster and Dan Jones saved the honor for Swainsboro by taking seventh and eighth. Reports John Derden: "Twenty spectators gathered to watch these crazy persons throwing sticks of wood." After the throw, Derden reports, "a great deal of spirited buying, selling, and swapping went on. Everyone seemed pleased with the tournament and ready to do it again."

Summer's Final Fling

Carefully thought out rules and a strict timetable by Doug DuFresne helped this end-of-summer throw at Portland, OR, run smoothly, abetted by Majorie Garrish's sponsorship and tournament savvy. With three firsts and a second, Barney Ruhe---all the way from New York City courtesy of a Japanese film team shooting him for a future appearance on Tokyo TV---took the over-all championship. Other individual firsts went to Jim Parker and Scott Kline. Team Gel, up from San Francisco, lopped team events. Reed College was represented by a team captained by freshman Alex Ruhe, a third-generation Ruhe clan thrower. In the junior competition, Greg Hays was the first place winner. ●



Profile of John Mauro

Following is an interesting article on John Mauro, the USBA president, by a colleague of his at the Richmond Times Dispatch. Mauro is research director of Media General, the parent company of the newspaper. The column, titled "Boomerangs: Fact and Faith," is slightly abridged and edited and is used with permission of the author.

by Shelley Rolfe

When most of us think of boomerangs, we conjure up visions of Down Under, kangaroos and koala bears. It is recorded in such formidable reference works as the *Encyclopedia Britannica* and the *Guinness Book of World Records* that the boomerang as we know it--the device that comes full circle if thrown properly--was invented by the aborigines of Australia for hunting and military purposes.

But when John Mauro thinks of boomerangs, he uses words like "beautiful" and speaks of a mystique that binds together people, who like him, are boomerang aficionados.

Mauro clearly is the Richmond area's foremost boomerang expert. He also may be the only Richmonder ever to have written a scholarly work on the art and science of boomerang throwing. In a book entitled *An Introduction to Boomerangs*, Mauro described boomeranging as a "sport which connects physical agility to intellectual stamina."

But Mauro also wrote in the booklet, which is a second edition after an initial press run of 1,000, that there are people who "joke about boomerangs...Many think a boomerang is a toy only for children."

Mauro obviously believes he has a mission to deliver a message that boomerangs are neither a laughing matter nor only for the young. As newly elected president of the United States Boomerang Association, he may also feel he has an official duty to do so. The association was established in 1981 with about 70 members. Now, Mauro says, "we have more than 500" in the United States and Canada. Boomeranging, he adds, thrives.

The association sponsors annual competitions. In 1981, it assembled a team to go to Australia--"everybody paid his own way," says Mauro--for a series of matches.

The Australians, Mauro suggests, may have been overconfident and amused at the pretensions of Americans in challenging them at their own game. The U.S. team won six of seven matches.

Mauro did not accompany the U.S. team in 1981. But two years later he was invited to speak on newspaper marketing and research to a group of Australian publishers in Canberra. He looked forward to comparing techniques and notes with the cream of

Australia's boomerangers. But to his dismay, he discovered they were a quarter of a continent away, at a competition in Adelaide

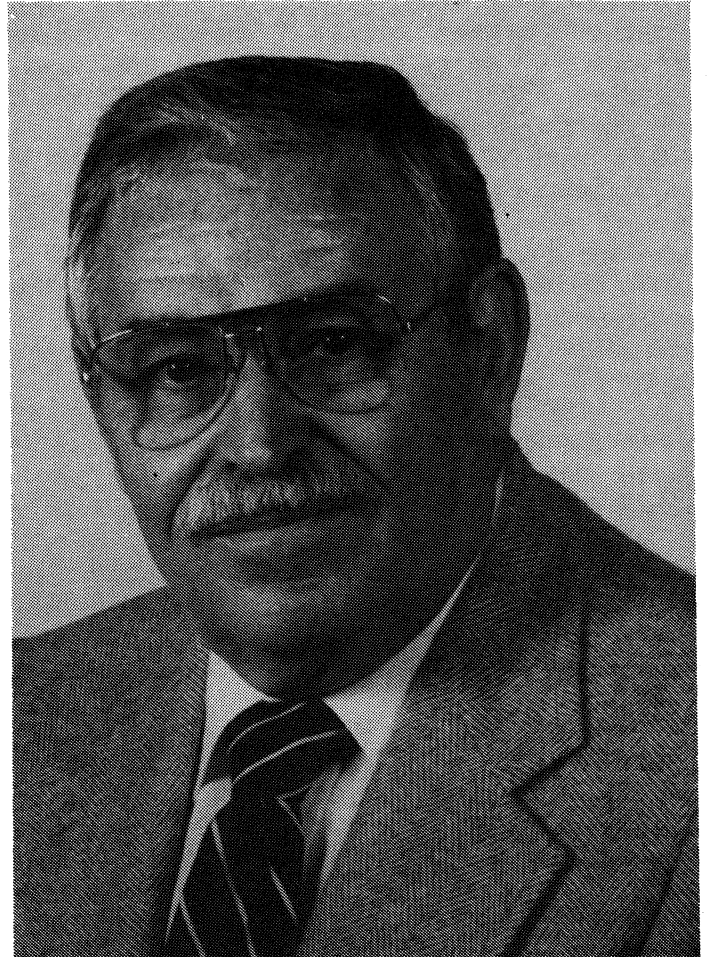
Mauro is a rather late convert to boomeranging. His infatuation began on a plane flight in 1978. "The flight attendants were handing out magazines and I got a *Scientific American*," Mauro was recalling the other day. "It had an article on boomerangs but not being a physical scientist I didn't understand it." When he returned to Richmond he bought a copy of the magazine and read and reread it until he became confident enough to try and make a boomerang. "To my surprise it flew," he said.

Mauro also believes his interest in boomerangs is a reflection of a long standing fascination with flight. He was a Marine Corps aerial gunner in the South Pacific during World War II. Following the war, while working in marketing for a New York newspaper, he took night courses in aeronautical engineering.

"Boomerangs are a lifelong fulfillment," Mauro said. "I can design my own boomerangs. They make me feel like a free soul." Mauro likes to think the boomerang he designed to celebrate the January 1981 release of the hostages that had been held in Iran was a strong statement by a free soul. It was shaped like the Liberty Bell and adorned with a yellow ribbon.

When he travels on business, Mauro packs a boomerang "for rest and recreation. I throw it in a park or school yard." He invariably draws spectators of all ages. He keeps a small lightweight boomerang in his desk. It is built for office competition.

Mauro has also made hundreds of boomerangs of all sizes and weights and has a closet full of them at home. Like almost all boomerangers, he is not totally certain why a boomerang behaves as it does. "We go on 80 percent scientific fact and 20 percent speculation and faith," he said. ●



President's Column

by John Mauro

Boomeranging is a wonderful sport. Many enjoy the variety of things one can do with a boomerang. The Aborigines of Australia used the boomerang as a universal tool - to dig with, to skin animals with, to stoke fires with and of course to hunt with. Some of us launch a boomerang and expect it to return with a six pack. Although this kind of thing is great for the imagination, the time has come for the USBA to view the boomerang as an object of a serious sport.

Our colleagues in Australia and other parts of the world see boomeranging somewhat differently. They give boomeranging serious consideration as a sport such as soccer, football, and baseball. Although we need not take ourselves too seriously we must join the rest of the world in giving boomeranging the dignity it deserves.

If Americans see boomerangs as oddities, perhaps we are to blame. Notice that anytime we have events it is not the sports reporters who cover them but general news or lifestyle reporters. Boomerangers are looked upon as freaks in some respects. The media treats us as oddities.

What can we do about it? Well, we can develop



events consistent with the rest of the world. When we throw in fields we practice these events and we explain these events to others as events of skill that require practice and intellectual judgment. We behave on the field as rational human beings instead of kooks looking for attention.

Last year Ali Fujino produced the Pocket Participant providing every member with rules and regulations governing competitive events. Use these rules until the updated version is released, which is expected to come out soon. Then when this comes out, use it. Don't invent more events that confuse spectators as well as contestants.

Support the USBA. If you don't, eventually you will not have it and we will be back to the beginning 15,000 years ago. Remember, if the USBA dies the opportunity of it coming back will be lost forever.

Consider too that boomerangs are designed by individuals who put much work and sweat into each design. It may be okay to copy a boomerang for your own use but to copy someone else's for the purpose of manufacturing and selling it is a despicable deed. Get written permission to do so then you are in the clear. Those who copy this way are quickly discovered and are usually ostracized. So don't do it.

I didn't intend to hang these things on you so heavily.

You may have noticed how beautifully the last newsletter turned out. This was no accident. Ben Ruhe and Ray Rieser did all the work and although it arrived somewhat late, other letters promise to get to you much sooner.

I am working diligently on the revised events along with the scoring method and the method of calculating player ratings. I'll try to get these out to you as quickly as possible.

Anytime you need to know more contact me or any Board member. We are here to serve you and you can reach any of us at the addresses located on the back cover of this newsletter.

Adios for now and many happy returns. ●

Computer Design Exchange

Many of the letters coming into the USBA have been done on a personal computer, and a number of our members are using computers for boomerang design. In light of this, the USBA would like to explore the possibility of establishing a library of boomerang design programs for exchange between members. If you are interested, please contact Ray Rieser at P.O. Box 2146, Lower Burrell, PA 15068, and give details regarding the purpose of your program, the language and the type of computer you are using. ●

Insurance Problem

For the past several years the USBA has provided an insurance policy which covered major tournaments held throughout the year. However, even though no claim has ever been filed, this past summer the rates were doubled, and we were no longer financially able to provide this blanket coverage. This matter was brought to the attention of the membership at the meeting held at the Nationals in Los Angeles.

It is currently the responsibility of the tournament organizer to obtain the necessary coverage for his/her event. A number of the organizers have informed us that they have been unable to find any agent or company willing to insure their tournaments. Since in most cases they must produce an insurance certificate to gain access to a throwing field, they have been caught in a bind.

The method that has been used most frequently to solve this problem is to have all the contestants sign a release of liability form. This, however, does not cover spectators.

Futhermore, we understand that some of our members have been denied access to their favorite throwing fields, for no other reason than the owners of the fields are concerned about possible involvement in lawsuits should someone get hurt. This is a sign of our times, and this matter will probably become more acute in the future.

We are hoping that some of our members with legal or insurance backgrounds may be able to offer advice or a solution to this problem. If so, please write to Ray Rieser, P.O. Box 2146, Lower Burrell, PA. 15068. ●



Research Paper Available

An article titled *Low Reynolds-Number Airfoils* is available to USBA members who wish to send \$2.25 to USBA headquarters for copy and postal fees. The paper is applicable to the design of boomerang airfoils and does not require a working knowledge of high-level mathematics.

William Kaufmann, editor-in-chief of *Annual Reviews, Inc.*, and the author, Dr. P.B.S. Lissaman, of AeroViroment Inc., gave their permission for the USBA to distribute the article in an unaltered state to the general membership, and thanks are due them. Dr. Lissaman is associated with noted aircraft designer Paul MacCready and he has made significant contributions to the design of the Gossamer aircraft series and other flying machines through his design of low Reynolds-number airfoil lifting surfaces. ●

Promoting USBA Interest

This past summer a new book on boomerangs appeared in bookstores across the country. It was written by one of our members, John Cassidy, and is entitled *The Boomerang Book*. It is large and well written book with numerous photographs and illustrations, and comes equipped with a boomerang on its cover. The 'rang was designed by another member, Dan Russell, of San Diego. Cassidy's book has generated a lot of interest in boomerangs and in the USBA. We have received more than 50 letters from people who had found out about the USBA through *The Boomerang Book*. We wish to express our thanks. Incidentally, if your local bookstore does not have a copy of *The Boomerang Book*, write Klutz Press, Box 2992, Stanford, CA. 94305. ●



Collector's Book Offered

H. L. Mayhew has donated the remaining stock of his book *The Big Book About Boomerangs* to the USBA for sale. This was the first book published by Come Back Press, and it is out of print and is no longer available from the publisher. The volume will not be reprinted, or revised, making these remaining issues a collector's item.

The books being offered were sent out for a special binding and were returned with a trim error. As a result, some pages have little or no outside margins. However, readability is not affected.

The Big Book About Boomerangs is abundantly illustrated and contains information on boomerang science, history and throwing techniques. It contains input from such big names as Hess, Ruhe, Naylor, Snouffer, Harding, Harrison--and many others. There are seven pages on the biggest event in U.S. boomerang history, the 1981 U.S. vs. Australia Challenge Series, won by the Yanks.

This book originally sold for \$7.50 including handling and postage. We are offering it for \$5.50 a copy including handling and postage to our members. To order, please send a check to USBA, P.O. Box 2146, Lower Burrell, PA 15068 ●

Bigger, Better World Master's Cup

Vitesse, the Paris sports promotion firm, is going to do the invitational World Master's Cup competition bigger and better next summer. The second annual championship in Paris will be held over two days instead of one, July 20-21, and the ensuing demonstration tour of French beaches by a picked team of Americans will encompass 12 resorts instead of 9 visited in '85. A budget of \$400,000, up from \$130,000, is projected by Vitesse ("Swift," in English). Running through Aug 10, the resort visits will be less hectic than the first time around since more time will be allotted to each city. Demonstrations, teaching sessions, and interviews are planned.

Rules for the World Cup are being formulated by Vitesse in collaboration with Jacques Beslot, technical director of the match, and Ben Ruhe, American liaison, as well as with the ad hoc international boomerang federation formed last July. In an innovation in 1986, there will be team competitions as well as individual ones. Yet to be decided are such issues as the size of the invited field (last year six countries were represented) and whether or not quality players willing to pay their own way to Paris will be able to compete. Americans wishing an update on the Cup can contact Ben Ruhe at 202-234-9208. ●

The Ripple Effect

With the visit of four ace American boomerangers to Paris for the World Cup match last summer, European boomeranging got something of a boost. US competition methods and equipment proved a revelation to the Paris Boomerang Club, for example, as several letters from members attest. Following is one of them, slightly edited and abridged:

by Dominique G. Pouillet

I want you to know it was a great pleasure for the Paris group to meet the U.S. team and we hope you will come back---maybe with John Flynn? We've heard a lot about him. I feel I learned more in a week in June than during the six months before. I modified my way of throwing (thanks to Eric Darnell), my way of catching (more dynamic and spectacular, thanks to Chet Snouffer). And Peter Ruhf gave me good advice on improving my boomerangs. We also realized that boomerang throwing and catching could be more spectacular in order to draw the spectators' attention (hello Barney Ruhe!), to make new adepts, and of course to increase our own pleasure.

It doesn't really work does it? I was incredulous and suspicious when a friend of mine told me, in the

beginning of 1984, that he had just discovered a fantastic thing called a boomerang. At this time the word boomerang called to my mind pictures of Australia, jumping kangaroos and Aborigine hunters, that's all. I wasn't enthusiastic at all.

But on the 12th of February 84, (I'll always remember that day), I caught an acute disease called boomerang-mania. The evolution was very swift; on the day following I bought two boomerangs, a week after I was making my first one. Since then I have been spending all my free time throwing, making boomerangs, competing, finding out new shapes, meeting other "maniacs" like me, collecting what has been written about boomeranging (books, technical reviews, photos) and even sometimes dreaming of the Ideal Flightpath! I've learned a lot of esoteric words I've never heard before, like drag, lift, precession, dihedral; other words have now a new meaning to me: hook, Napoleon's hat, omega.

Boomeranging, a huge universe, never boring in which you're always discovering something new, surprising. I like to "convert" people to the pleasure of boomeranging and I feel like a missionary when someone becomes as passionate as I am. That goes without saying that I'm surrounded with boomerangs hung on the walls of my flat (I think you have already guessed it). Well I just wanted to put into words my passion. •

News From Australia

If a Yankee (John Flynn) can crack the magic 20 second mark in Fast-Catch, can an Aussie be far behind? The answer is no. Young Robin Witka of Sydney recently registered a 19 second clocking in practice and is aiming to repeat in a tournament... Brother Brian Thomas, Australian national coach, got to meet the Pope during his recent assignment to Rome with the Christian Brothers, a teaching order. "I met the Pope," says Brian, "at a general audience, so there was no conversation possible as he moved along the line to shake hands. I merely said: 'God bless your Holiness.' But I did manage two handshakes in the brief encounter."...Clifton Furukawa of Seattle, an allergist, got so interested in boomeranging that he took a guest lectureship in Sydney recently to pursue his interest. Dr. Furukawa made the obligatory visit to Duncan McLennan's boomerang shop in King's Cross and met the great man himself. "We had a wonderful visit to Duncan's shop. Bought lots of stuff and had our first lesson in throwing. We have given lots of rangers away and the sport has the shoulders of both my wife and I aching--- but now I can even catch."... Octogenarians Les and Arthur Janetski of Albury write that they have quit making boomerangs (promptly doubling the value of



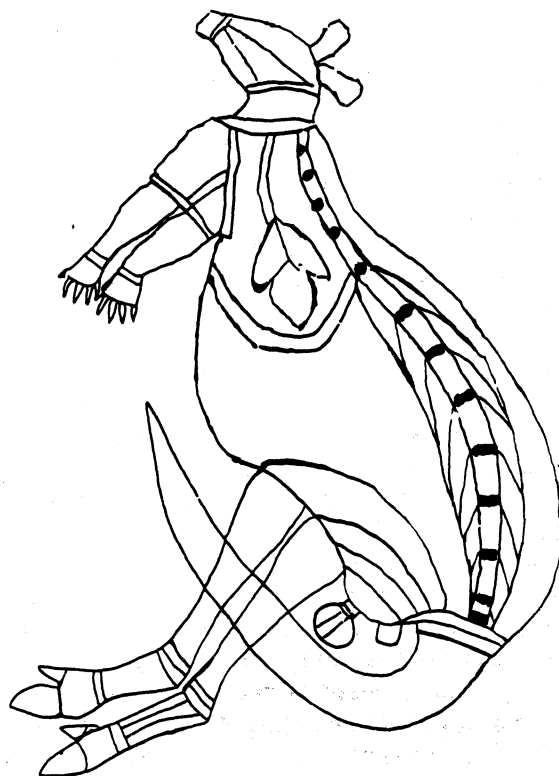
Brother Brian Thomas meets Pope John Paul II

all Janetskis in a collection?) but that they have one or two throws a week. "That's sheer joy for two old boomers," they note....An interesting moment in history was documented by an Australian Associated Press photograph recently: An Aboriginal holding a boomerang met 20th century communications technology. The scene was a phone booth in the remote Daly River area of the Northern Territory where an Aboriginal was photographed using a sun-powered telephone, while a boomerang toting mate stands by to give moral support. The photo was used around the world...Reading about a computerized boomerang cutting rig in California, Dr. Lorin Hawes of Runaway Bay, Queensland, who set up a new boomerang park, and is again manufacturing his famous basic M17 model, comments: "What cheered me up most though was seeing a picture of a boomerang-making machine. Whilst nobody in the business will ever see mine, I reckon that it would be at least 10 years ahead of his. It is now mechanized to the point where incredibly smooth edges and uniformly contoured surfaces are produced without any hand work at all until they are finished."...In an unprecedented action, the Industrial Design Council of Australia has awarded Sam Blight of Perth an Australian Design Award for two of his beautifully decorated and fine flying boomerangs. Factors considered included performance, appearance, durability, safety and ease of use....Dr. Peter Johnson, an economist and strong-armed leftie thrower, travels

the world for his Australian bank and throws everywhere he goes. After a recent jaunt to the U.S. and Europe, his best anecdote concerned a taxi trip in Paris: "I was short of francs, and after an amusing taxi ride with one Dov Ganem, I exchanged part of the cost of the trip for a boomerang. M. Ganem was trusting enough to accept my assurance that I would send a boomerang to him from Australia. A Byham Rosella is winging its way to him now."....Quote of the month: "Boomerangs are as Australian as flies and sand." ---Jenni Garrigan, Perth Sunday Times....Second best quote of the month: "The Australian Aborigines are naturally the best boomerang makers and throwers in the world. But they have to rediscover their inheritance; the skills are being taken over by white champions here and in other countries."--Juergen Preuss, as quoted in the West Australian newspaper....Preuss, by the way, is talking up an international boomerang competition to be held in connection with Australia's defense of the yachting America's Cup in Perth in 1987 and has already decided on a marvelous award if the competition comes off. He proposes putting up a huge boomerang he will call the Gigantorang. He will have it gold-plated, of course. ●

hand at the Paris World Cup match last summer to size up the techniques and the equipment of the Yank and Aussie throwers.

The Swiss federation has already scheduled its '86 championship for the first weekend in September. ●



New Federation Forms

The Swiss recently formed a national boomerang federation and held their first national championship at Geneva, organized by Nguyen Anh Kim of Griefensee with aid from visiting German boomerang federation member Gunther Wandke. Eric Pampaloni of the home Geneva club captured top honors with firsts in Aussie Round and Fast-Catch. Kaspar Kramis of Geneva took 10-Catch and Pierre Wakley, also of Geneva, took Precision (he's the European record-holder for most consecutive two-handed catches with 184). Teams from Basel and Lurice competed against the home club. It is expected that a club from Lausanne will join in future tournaments and become a federation member.

How did interest in the boomerang evolve in Switzerland? Philippe Haake, a psychiatrist, explains that it started when he made a vacation trip to Australia several years ago, discovered the boomerang on a sheep station, bought one and learned to throw it, and eventually told Kasper Kramis, who runs an American style restaurant in Geneva, about the oddity. The two took the boomerang out throwing, attracted interested spectators who quickly joined in, and pretty soon boomeranging was under way. As usual, the sport spread via television coverage and word of mouth. Haake and group honed their competition skills and knowledge by making trips to tournaments in Holland and France, with several on

Whither the Olympics?

Marjorie Gerrish of Portland, OR, and H.L. Mayhew of Columbus, OH, dream of having boomerang-throwing added to the Olympics as a new sport. Responding to their inquiry, the U.S. Olympic Committee outlined the basic requirements for this to happen. First, there must be an international federation (the boomerang world is working on setting one up). Secondly, there must be codified international rules (the proposed federation would attempt this). Lastly, national federations must exist in 90 or more countries on three continents (a stumbling block of major proportions for boomeranging, which has no more than 15 national federations to this point). Boomeranging clearly needs to catch on as an international craze, like windsurfing did, to expand sufficiently to justify optimism at this point. What may make sense now is for Australia to push for the inclusion of the sport in the Commonwealth Games----a unique sports contribution from the land Down Under. Such inclusion could be the thin edge of the wedge needed to make the Olympic dream advance a large step closer to reality. ●

The Winnah!

The ongoing Many Happy Returns competition -- --What do you carry in your magpie boomerang bag?---has ended and Barney Ruhe of New York is the clear winner. His long inventory was published in the Winter '85 USBA newsletter (No. 21) and is worth looking up for its charm and insights. For his victory, the William Tell stuntman wins a prize boomerang, donated by the editor of *Many Happy Returns* Forthwith, an unedited sampling from his prize-winning essay:

- Pennies plus aluminum tape, for reweighting b's for wind, returning.

- Lots of post office rubber bands, to keep b's in stack presses, prevents warping from sun heat and steam.

- "Green Gripper" : "Wipe on grip and control"--a sticky towel that gets fingers tacky so you can "bury" a 40 meter distance b' below the horizon- in order to get it to come all the way back in no wind. Also great to rub over whole b' for sure catch (pitcher's rosin, plus sweat, combine comparably; maybe the best of all is orange juice goo).

- Plumber's toilet ball-cut in half, with the bolt filed down to a spike, sliced to spread to fit the head, rubber padding taped on the copper toilet ball, all to make the apple perch, as the spike pokes through.

- Arm and forehead sweat bands. Can hitch armband up to elbow to aid in warding off tennis elbow.

- Cleats: required. B'er is a launching platform. Must dig in for stability, and power push-off.

- FETISH. This is personal: can be a striped red and black sock with a sea stone and an emu thigh bone knob. Can be a peg dressed with emu feather, peregrine tail feathers and claw, black Aussie eagle tail feather; fetish useful in dialogue with furry bear wind spirits that noxiously bat the boomerang mid-air, waiting till after launch to descend and derail impeccably aimed b'.

- Flask and Jamison's scotch whiskey, when the winds are soooo wild one needs a nip of courage. ●



One Up In Japan

The inscrutable East met the scrutable West and guess who won?---Barney Ruhe. Appearing on a Japanese version of "To Tell the Truth," Barney, one of three panalists, announced under questioning by the judges that he had written a book called *Zen and the Art of the Boomerang* starred in a French film showing boomerang throwing in the New York subway system among other arcane places, and threw a favorite 'rang named after the Japanese samurai warrior Musashi. Feeling this was a put on, the experts voted unanimously for another panelist whose total boomerang knowledge stemmed from a quick reading of a volume on the subject. Afterward, Barney sought out Yoshinobu Sakimitsu of Yokahoma, the Japanese national boomerang coach, and had a throwing session with him. Sakimitsu got 36 seconds on his second throw with a Ruhe MTA 'rang and otherwise showed excellent ability. Barney pronounced him "bright, sweet, John Flynn-size, although slighter." After scaling a mountain near Kyoto with a Japanese- American woman friend seeking a hermit potter and other adventures, Barney returned home to New York City with 32 used kimonos to give as gifts to friends. ●



Boomerang Workshops

Workshops are an excellent addition to the curricula of many open universities that are flourishing across the country, sponsored by recreation associations, private companies, and others. Bob Kley of Irvine is working with the cities of Irvine and Orange, two local colleges, and a pair of Marine air bases---"military bases are looking for recreation programs," he notes-- to set up such sessions. He has planned workshops that begin with a lecture indoors and then on another day evolve into an outdoor throwing session. Players get a text, two boomerangs, and a throwing checksheet, all for a minimal amount, plus some devoted teaching by Kley himself, owner of Rangs West. "All very exciting," he says. "Maybe enough interest in our mutually shared sport will be generated that an Orange County chapter of the USBA will be possible." If you want to give workshops a try, contact Kley about the intelligent materials he has printed up for his own use: 5200 Irvine Blvd., No. 294, Irvine CA 92720, or phone him at 714-731-8131. ●

Organizing a University Club

Expert boomerang thrower Paul Sprague of Middletown, CT organized a boomerang club at the University of Illinois in Urbana, where he is a student, and reports things are going well. His comments, which follow, might be taken as a model by other college and university students thinking of setting up a 'rang club, or by throwers near schools where an organization such as Sprague describes could be set up and coached. How about some intercollegiate matches next spring around the country, when the weather warms, the wind dies, and before school lets out for the year?

by Paul Sprague

I'm the president and founder of the University of Illinois Boomerang Club, which started in January of 1985 and now has 80 members. It was great putting this together -- there's a real vacuum in schools like this waiting for clubs to form and the temper of the times seems to be perfect for boomerangs. I discovered that the organization could set up an account with the university just by asking, which allows it to borrow funds from the school and makes it eligible to receive money from the Student Organization Resource Fund -- up to \$1,000 in free money, essentially. We are a registered student organization, recognized by the university and a member of the UI Sports Council.

Semester dues are \$2.00 per person. I've had some difficulty collecting this because I can't take money on university property, which is where I do most of the promotion. The club owns only three boomerangs, but I'm content to let the members use mine. I bought a lot of Boomerang Fevers and sold them to club members, putting a cut of the profits into the school treasury. This solves the problem of too little capital, while I'm really at no risk because I'll be able to sell them all eventually. I never go anyplace with less than four of them in my books (so far, that's the most I've been able to get in the air at once and catch without dropping).

The club gets free advertising through the Sports Council. We get a certain number of flyers and advertisements per semester, so that's not a worry. We also get use of university vehicles for only a few cents a mile. It would be within our budget to take a road trip to throw against a similar organization at another school. (Anybody out there?). We got free stationery and membership cards, but we had to make up our own T-shirts.

Club meetings are weekly at 6 o'clock when the wind dies down. We have one general meeting each semester to elect officers and to brainstorm. This happens either in a classroom or in a campus tavern. This semester we are having workshops for the members who want to learn to make their own boomerangs. I had some

trouble getting space to do this even after we all signed releases promising not to kill ourselves with the power tools. If these workshops go well, we will try some open workshops for anybody interested.

I put out a mailing about every other week to all the members telling them what's up. One other freebie the club gets is the use of the campus mail system. It can get to everybody who lives in university housing, which is about 60 percent of the members and it doesn't require postage.

It might not be as easy at some other schools to form a group like the UI Boomerang Club, but I'd like to encourage people to try. We've had a lot of fun with it here and I'd like to see some intercollegiate competition.

Two-thirds of the club members rate themselves as beginners, so at present we're largely still trying to learn to throw a basic boomerang, but there's building interest in better sticks and the finer points of boomeranging. We'll be competitive before long.

Now that it's cold, we've moved into the university armory --- a lot of space in there. It is plenty big for Wham-O boomerangs and Boomerang Fevers and we enjoy the laboratory throwing conditions -- no wind.

The UI Boomerang Club would like to hear from other university clubs, for an exchange of information and possible competition. Address me, Paul Sprague, at 1210 W. Park St., Urbana, IL 61801. •

Student Research Projects

More and more university and high school students are taking up boomerangs as a subject for study. Theses, term papers, science fair projects---you name it, 'rangs as a research topic is catching on. As one example of the sophistication being brought to bear, following is a letter from a teenager soliciting help---anyone want to respond?

"I am a senior at the Science and Technology Center of Eleanor Roosevelt High School in Greenbelt, MD and am conducting an experimental research project consisting of the improvement of the boomerang's aerodynamic capabilities through variations in its shape.

"In order to do this I am investigating areas that could pertain to this field of study. They are: Helicopter rotor design, airplane wing aerodynamics, and boomerang shape design and aerodynamics. Can you please send me any reports, pamphlets, studies, or addresses of where I could get information on these subjects or any other subject you feel is related to this area of study.

"Could I also please have any other suggestions for improvement of my topic." -- Anthony R. Steward, 14709 Cambridge Dr., Upper Marlboro, MD 20772. •

BOOK REVIEW

by H. L. Mayhew

Book reviewers like to think they provide important information for potential book buyers. Invited to review *Boomerang, How To Throw, Catch and Make it*, I submit the following important information for USBA newsletter readers!

Beginning with the bare facts, co-authors are Benjamin Ruhe and Eric Darnell. It's published by Workman Publishing, New York, and simultaneously in Canada by Saunders of Toronto, Ltd. Illustrations are by Cheslye Larson, Eric's wife.

It's hard to imagine a better pair of co-authors for a book about boomerangs. Ruhe is an authority without peer on the boomerang, the world's only totally rotary and completely orbital flying machine. He's also a first-rate authority on enjoyable round trips, a primary, if not the only, purpose for learning how to throw, catch and make boomerangs.

Ruhe's news reporting background and experience keeps his writing crisp and to the point. The text is straightforward, expository, no nonsense, clearly written English, easy to understand.

Darnell's credentials are no less impressive. Ruhe captained the '81 team that invaded Australia and brought the International Challenge Cup to the U.S. Darnell was a team member. Ruhe captained the U.S. team that toured Europe in the summer of '85 and team member Darnell brought back the world record for the first world class boomerang endurance contest -- 42 catches in five minutes.

You can't avoid admiring Darnell's boomerang design expertise; a polypropylene Darnell boomerang is affixed to the Ruhe-Darnell book in a blister-type, shrink-wrapped, see-through package. What you see is what you get: A complete, multi-purpose round-trip kit for reading enjoyment, and for amazing yourself and your friends.

This does present a problem. Where does the buyer go from the bookstore -- to the throwing field or to a comfortable chair for reading?

If you head for the throwing field, read the instructions on the back of the Darnell boomerang and you will find it's designed for a right-hand, trailing wing (dingle arm) launch. The boomerang isn't fussy which end started first when it's spinning end-over-end, but the small fistful throwers will find their fingers wrap around the slightly narrower dingle arm (trailing wing) more comfortably and more securely. That makes the proper throw much easier.

The implied suggestion is, try it Eric's way first.

Another possible problem: How does a librarian handle an unwrapped book and boomerang? The on-line computer service to the Ohio State University library, on the campus Ruhe visited on his recent book



promotion tour, came up with "we're still working on it." The Library of Congress cataloging information on the computer terminal screen had a few blank spaces..... to be filled in later.

Not to worry. Buy your own copy of the book. Every good boomeranger needs another good boomerang, and a stash of reading material for the non-boomeranging weather and other reasons. For less than a 10-spot (plus tax, if applicable), you get both. Small investment -- big returns.

Long-time boomerang enthusiasts are likely to be pleased, rather than amazed, by *Boomerang*. Lots of photographs show what the text tells. In many photos, action speaks louder than the words. Twenty or so of the photos were taken by Holly English Payne, charter member of the USBA, a skilled thrower herself, whose Long Island turf is the boomerang tournament territory for the New York and East Coast boomerang bunch.

The book is definitely aimed to appeal to the intelligent, success-bound adult. If you identify yourself as one, here's your book. It was also put on the market just in time to solve holiday shopping problems for relatives and friends in the target audience category.

Other data: The Darnell boomerang weighs two and one-half ounces, and has a textured surface on some airfoil areas for better gripping and for aerodynamic reasons. The book, just for the record, is nine inches wide, just over eight inches deep, weighs a bit more than eight ounces, and may not return soon if you lend it out.

The Ruhe-Darnell *Boomerang* is a trade book; that is, it's published for sale in retail bookstores. Such wide availability will surely help spread the word about our favorite sport.

Turning bookstore browsers into boomerang throwers and catchers is no easy task. But the combination of *Boomerang* and the attached bright red Darnell boomerang turns the interesting challenge into an attractive possibility.

H.L. Mayhew is the author of two books on boomerangs, *The Big Book About Boomerangs* and *How to Catch a Flying Boomerang Without Using a Net*. •

Correspondence: A Chant, Networking

"Here's a tid-bit I discovered while researching some aboriginal designs for 'rangs. It is a method for reducing the velocity of the wind and comes in the form of a song sung by the people of Groote Eylandt. While these people did not possess the boomerang and while this chant was designed specifically for a particular South-East wind blowing throughout the Astral summer, anyone living in a location as perpetually windy as Buffalo might be willing to try anything to increase the number of boomerangable days. The chant is as follows":

"Manariga aruda unga-poua tudua-akurapa merit-bia." (South-East wind (in the) southeast totem place, too much wind).

"The source of this was Records of the American-Australian Scientific Expedition to Arnhem Land, Volume 1 (Art, Myth and Symbolism), p. 95-96, by Charles P. Mountford, published by Melbourne University Press, 1956. On the whole a very interesting volume, if you are into aboriginal art and myth. If not, it still has lots of great drawings and design ideas for 'rang decorations. Anyway next time it's too windy, give it a try, I'm sure accompaniment of a digereedoo and clacking boomerangs would help. The chant has to be more effective than cursing and retiring to the nearest pub."--Herb Mueller, Cheektowaga, NY.....I would like to describe my collection. It began with an M17 and an Australian back in August '84--At Christmas time, Mom and Dad acquired for me a Windcheater, two Floaters, and a Mini Napoleon's Hat--My gyrostar has been an amusing tool for studying aerodynamics, I have found that a couple of paper clips on opposite wings right at the cross increase its accuracy, decrease the range, and make the spin much faster. My next acquisition was an acute V 'rang that I bought in a store in Boston, and it looks better than it flies, but flies very well. It circles rather than hovers, which is advantageous in the wind. At the same time, I found a Wamo-O-Rang, which I bought as a toy (I've got a Nerf, too), and I was suprised to find it takes a real throw! Catching it is absurdly easy, but after the little wrist flips that the Nerf and Gyrostar take, I was pleasantly startled. A side note here is appropriate: first, for my birthday party April 4, I had all my friends bring their 'rangs, and we laid them all out on my hearth and were very impressed. Our combined collections total more than 60, which we consider quite respectable for starters. Second, I'm a senior in high school now, and this means around Christmas time I was writing college applications. Several of the schools I applied to asked for an essay on any topic, so I wrote on boomerang throwing. In fact, I found a place for at least one essay on boomerangs on every one of my applications. Happily, boomerangs got me in, to Harvard, Yale,

Brown, Stanford, Duke, Swarthmore, and the Plan II honors program at the University of Texas. I'm going to Harvard, where I hope to get a large enough group of 'rangers to have competitions." --Glen McDonald, Dallas, Spring 1985. ●

Why I Bought a Lightweight Leni Barker Redwood Boomerang for My Dear Wife

*She's enthusiastic,
but her arm's too elastic,
with my 'rangs out of plastic
her throws aren't fantastical*

---Steve Woodson, Gulf Breeze, FL.

What They Had To Say

"Sailing into the air and into the fancy of Americans, bored with Frisbees, is a simple object, long associated with Australia and its Aborigines. Is it a bird? Is it a miniature plane? No, but it is a super flying machine: It's a boomerang. No longer just a reference under Australia in the encyclopedia, there are now whole books written on the subject of boomerangs. Clubs are formed with competitions held to perfect members' throws. There is even a newsletter for free-stylers among the 'rang throwers to keep them informed of happenings on the field of play."--B.G. Shields, Sewickley, Pa., Herald..... "(Boomerang throwing) allows you to think like a bird---in terms of wind velocity, wind direction, humidity and temperature." ----Eric Darnell, as quoted in the Washington Post...."Consider the boomerang...a slim, crooked stick, sanded and polished to a shiny finish, it is all wing. Thrown overhand like a peg to second base, it flies end over end toward a distant line of trees, then curves, flattens out, spins, swoops and all the while traces a serene and bird-like arc through the air. Riding the breeze back home, it slows, hovers for a moment above an outstretched hand, and drops gently down. Beautiful. At once a baseball, helicopter, glider, hawk and feather, the boomerang seems the most complicated and simplest of miracles--a flight of fancy come to life"---John Calderazzo, Marathon World. ●

Fame for a Day

Want to get yourself on local television and be a celebrity for a day? Don Murray of Gainesville, FL, figured out a way to do it which could be copied by anyone. He challenged a local TV sportscaster to a boomerang throwing match.

The challenge was accepted and on the appointed day a film team arrived at a park where Murray took on the newscaster, John Mugent, of WCJB, whose program is viewed in a 15-county area by a quarter of a million people. Murray and brother-in-law Ray Brady lined an eight-yard diameter circle and established competition rules for catches and touches. The TV man awarded himself a handicap---five throws against one for Murray.

With a gusty wind to contend with, Murray managed a touch outside the circle in his lone attempt. The television man also got a touch in one of his five tosses and, failing to announce the handicap to his audience, declared the duel a draw.

Murray received a T-shirt in recompense, as well as free publicity; the television station got itself a funny five-minute segment. Square all around. ●

Around and About

Interested in lighting up your boomerangs for night throwing? If so, a new source for Cyalume, the cold light chemical, has been discovered: fishing shops. Small cartridges are sold as "Lunker Lights" and a packet containing them claims that their use leads to catching more fish, just how isn't explained....Dr. Paul Okunieff of Boston plans a trip to Mount Kilimanjaro in Africa and vows to throw a boomerang in the crater atop the 19,340 foot peak, Africa's largest. The combination of thin air at high altitude and calm winds because the site is so sheltered should pose a unique throwing problem. Okunieff will report in due course....Joel Miller solved the boredom problem while serving as a U.S. Park Service ranger at the Lincoln Memorial in Washington last summer. When the crowds were thin and time hung heavy on his hands, he got out his boomerangs and chucked them around....After reading about Ben Ruhe's interest in boomerangs in the New York Times, Mrs. Frederick Thompson of Petersborough, NH, sent him an Aboriginal boomerang she had been given in 1943 while a Red Cross worker in Darwin in Northern Australia. The chevron-shaped 'rang, made of wood, is beautifully crafted and apparently a returner---a treasure....On the subject of collecting boomerangs, many collectors groaned when they heard that the estate of the late John McMahon, the famous "Billy Boomerang" of South Padre Island,

Texas, had been auctioned off and contained a trove of 'rangs he had made himself and collected all over. Whereabouts of the trove is unknown at this point.... George Reitbauer, a member of the U.S. national boomerang team in 1984 and maker of some of the most beautiful laminated boomerangs around, has accepted a teacher exchange job and will spend a year in Melbourne starting in January. Reitbauer, of Annville, PA., is currently experimenting with lighting up 'rangs for night throwing with fiber optics and he invites others to experiment with this material. A progress report will appear in this newsletter....Dr. Leziro Marques Silva of Florinaopolis, Brazil, is finishing up a major research project on boomerang flight at the Federal University of Sta. Catarina. He is doing computerized wind tunnel research.... Ali Fujino, past president of the USBA, has written a book with the editors of Science '86 based on the Second International Paper Airplane Contest which Ali ran at the Seattle Museum of Flight, where she is a staff member. Simon and Schuster will publish it... Kevin Cox and friends have established a boomerang club in Charlottesville, VA, and plan to challenge the University of Virginia gang to a town vs. gown match. "We devoted townies would really enjoy defeating a Whahoo team," he says.... Viki Todd and Theresa Kreiha, cannon-armed schoolmarms from Ogallala, NB, plan some tournament appearances next year and are practicing hard for them. Because they live in breezy Nebraska, both are fine wind throwers. ●

Organizing the Collecting Craze

One of the phenomena of boomeranging in recent years has been the collecting vogue that developed. Australian Aboriginal models, particularly if 19th century, and laminated contemporary 'rangs are a major focus. Ted Bailey has organized the Quality Boomerang Trade Association, made up of like-minded craftsmen, to nurture this collecting urge. Members trade their own work for other 'rangs, or buy, as the case may be. Here's how Bailey himself, maker of lovely laminated hardwood sticks that fly well, goes about things. He trades his creations for other boomerangs based on the number of man-hours he thinks they are worth (the ratings are very much his own): Janetski brothers (9-12), Frank Donnellan and Bill Onus (10-15), Lin Onus (6-10), Richard Dawson (5-10), Joe Timbrey (5-10), "Bluey" Williams (5-12), Brist four-bladers (4-6), Australian Aboriginal (3-20), and Hopi Indian rabbit sticks (5-15). Fascinating evaluations by Bailey! He can be contacted by writing him at 2967 Gracewood Rd., Toledo, OH 43613 or Phone: 419-471-9989. ●

MTA Tuning and throwing

by Ted Bailey

Introduction

There are two methods of tuning and throwing MTA boomerangs that I learned and developed in 1985. The first method, described below, is the easiest and was basically the only method which I observed accomplished throwers using in competition during the summer of 1985. This method, called the "rotary glider" technique, allows the thrower to put full power behind the throw, resulting in the boomerang spiraling upward as if it were climbing the threads of a screw to its zenith point. One can average about 30 seconds per flight with this method in decent weather. The second method of tuning and throwing, which I call the "samara" technique, produces less consistent results, but many of my flights which exceeded one minute duration were accomplished using this technique. The samara is a winged fruit such as a maple seed pod. I developed this method by trying to simulate a ground-to-air samara launch using two large artificial samaras made by Ray Rieser. The MTA boomerang climbs almost straight up to a point higher than with the rotary glider technique and if the throw is done correctly, it can produce extra long duration flights.

The instructions given below must be memorized and precisely followed in order to achieve consistently long flights. The habitual sidarm thrower must be extra cautious when following these instructions as a very

narrow launch window is needed for both techniques. Left-handed throwers must assume mirror image symmetry when following the instructions. Frequent tuning may be necessary, especially with minis, because of warpage that may occur due to storage, shipping, temperature changes and catching.

MTA Boomerang Terminology

Note that the two arms are of different lengths. The long arm is referred to as the "lift arm" and the short arm is referred to as the "dingle arm." The arms connect at the "elbow." To define the elbow, suspend the boomerang by each arm (blade) tip and drop a line straight down through the center of gravity to where the vertical arm intersects the opposite arm. Mark the intersection on each arm with an "X" mark. The elbow section lies between the two "X" marks and must always remain perfectly flat for all tuning techniques or the instructions below will become meaningless.

Flecture of the blade between the tip and the "X" mark to produce a gentle concave upward warpage is called adding "positive dihedral." When the elbow section is pressed flat against the table top, the blade tip should be elevated above the surface.

Twisting the blade such that the leading edge is elevated above the trailing edge gives the blade a "positive angle of attack." If the blade is twisted such that the trailing edge is elevated above the leading edge, then the blade has "negative angle of attack," also referred to as "washout." The twist should always be made by holding the blade between the tip and the "X"

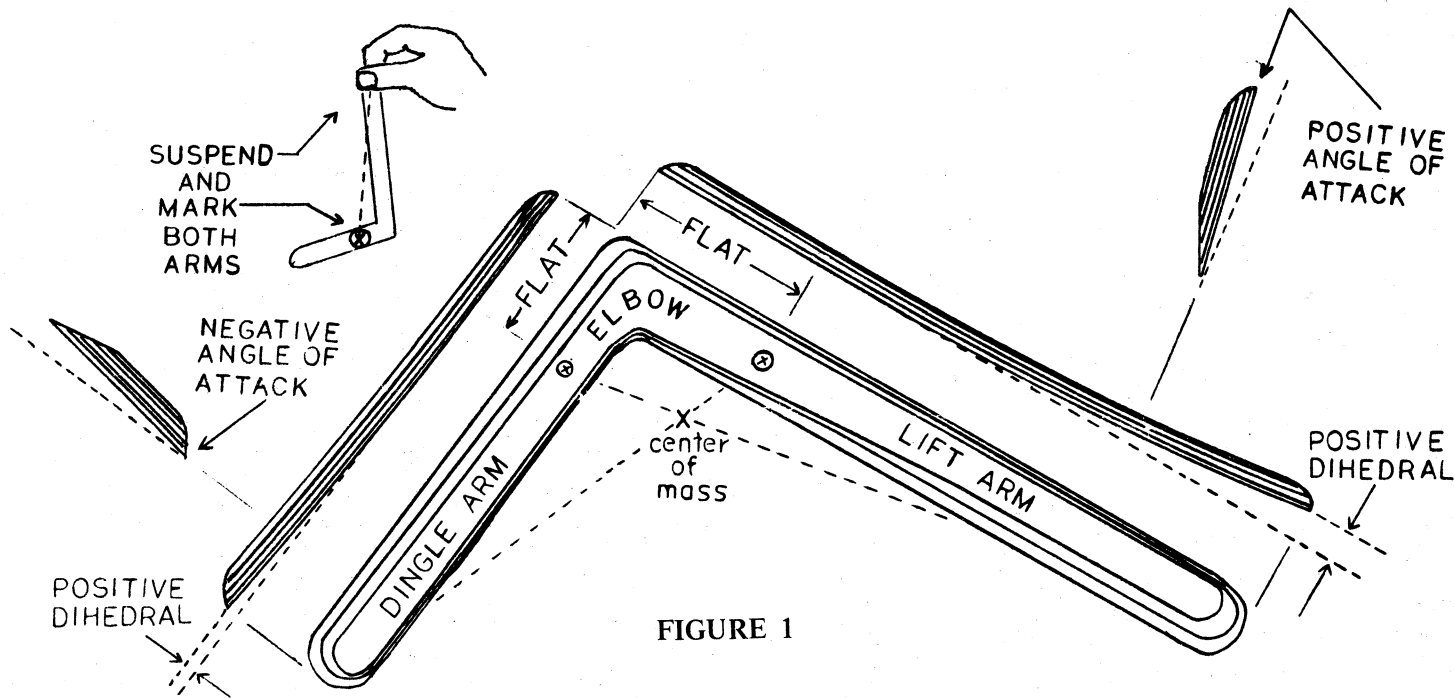
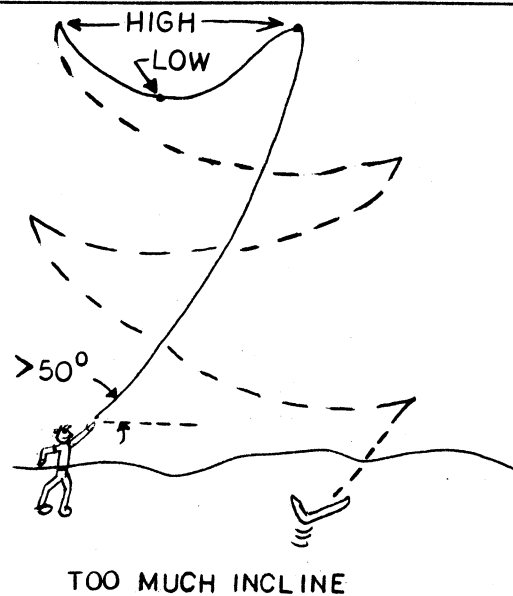
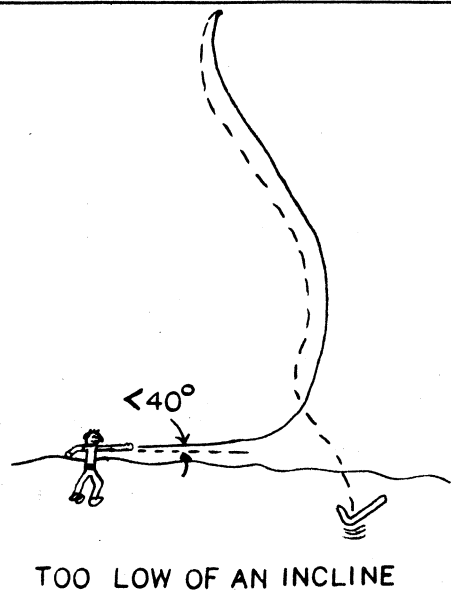
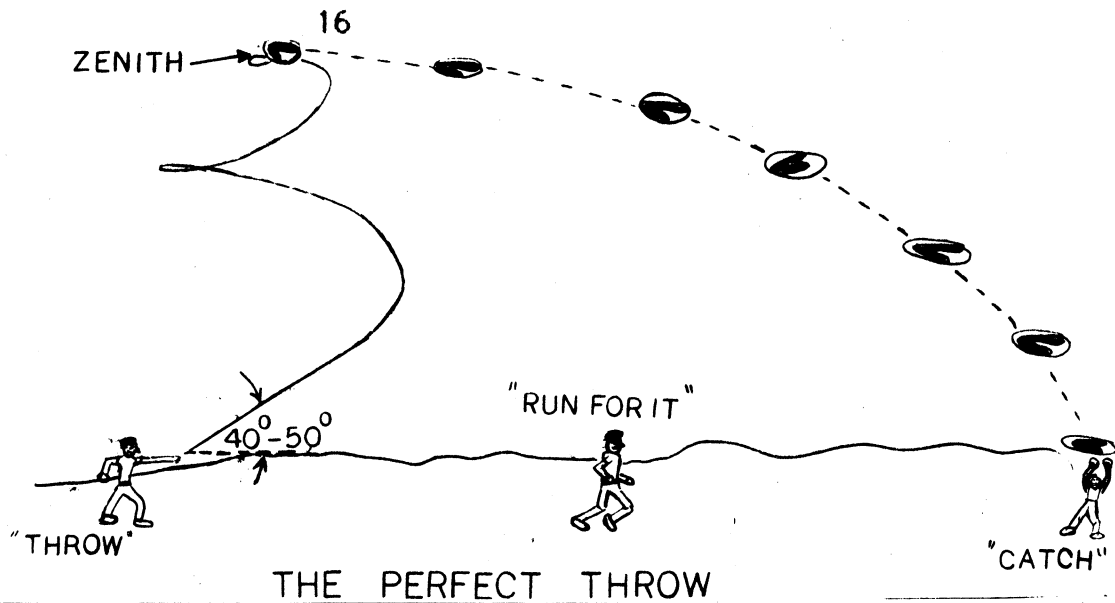
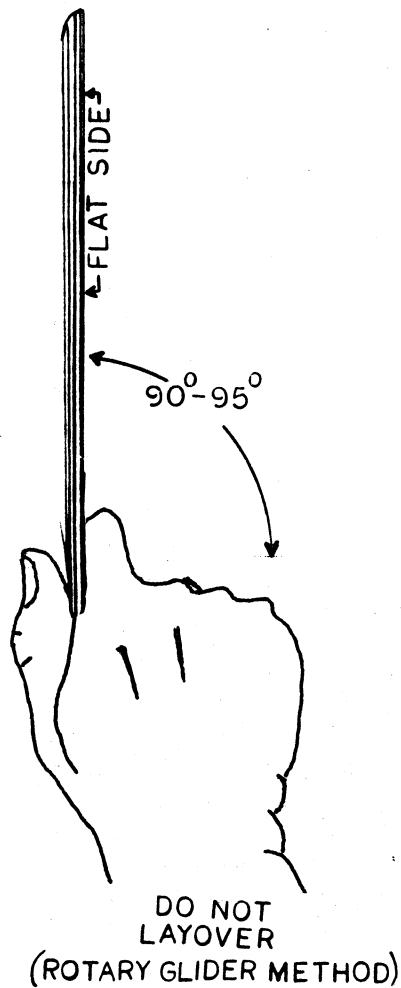


FIGURE 1



mark. The "leading edge" is the edge of the airfoil that enters into the air as the airfoil rotates about its center. The "trailing edge" follows the leading edge in rotation.

Figure 1 illustrates the above defined terminology. The boomerang illustrated is a very efficient mini-MTA boomerang made of 2mm-3mm plywood and has a tip to tip length of only 14 inches.

The Rotary Glider Technique

Tuning- Both arms require a gentle concave upward bend from the "X" mark to the tip. The lift arm requires a positive angle of attack twist and the dingle arm requires a negative angle of attack twist. This results in the outside perimeter of the boomerang resting higher than the inside perimeter when the boomerang is placed on a flat table top. The boomerang would lie nearly flat if it were resting on the inside of a

shallow conical bowl. The boomerang requires further fine tuning in the field. If thrown correctly, the boomerang should make from one to three complete circles, with each circle successively smaller than the one preceding it. The boomerang should spiral upward as if climbing the threads on a screw. If the boomerang is thrown and it makes circles without climbing to sufficient height, then you must add more dihedral to the lift arm. The closer the bending is made to the "X" mark, the higher the boomerang will climb. Do not add too much dihedral or the boomerang will climb straight up and return to earth in a chaotic mode. Stability is controlled with three basic mechanisms; dihedral in the offset dingle arm, the negative angle of attack in the dingle arm, and the positive angle of attack in the lift arm. High values of the angle of attack provide more stability when the boomerang is drifting to earth, but stability is not without sacrifice as the drag forces are also higher, resulting in a lower

rotational speed and a faster sink rate. Beginner MTA throwers should use high angles of attack. Experienced throwers should use high angles of attack in windy weather and reduce the angles of attack during calm weather to take advantage of controlled rotational speed and sink rate.

Throwing—The most important rule to remember for this technique is: Do not layover! The boomerang at the moment of release must be orientated essentially at a right angle relative to the horizon. The second most important rule to remember is: The boomerang needs substantially more incline (at release) than other boomerang throws require. The incline angle is usually 40° – 50° but can be more or less. The general rule is: more dihedral in the lift arm requires a higher release or incline angle and a harder throw. The angle thrown into the oncoming wind varies with the boomerang's tuning and wind conditions. Try several different angles each day to see what will work best. Some throwers like to throw downwind. It is easier to throw by holding the dingle arm. Some throwers feel that the lift arm throw allows you to transfer more energy into the boomerang at release. Try throwing by using each arm and use whatever is most comfortable for you.

The Samara Technique

As in the rotary glider technique, the dingle arm requires positive dihedral and negative angle of attack. The lift arm requires a positive angle of attack but only a very small amount of dihedral should be placed into the arm. With the lift arm almost straight, height must be achieved with a different throw. With this technique, it is best to throw by holding the dingle arm. The incline angle is higher (50° – 70°) and the thrower needs to use a layover angle of 45° – 75° from the horizontal position for best results. This method does not work well in calm conditions. Under ideal conditions, the boomerang will climb to a very high zenith point, resulting in longer flight times. This technique is not recommended for the beginner MTA thrower.

Catching Instructions

Be careful when you catch your MTA boomerang. These high speed and low drag models store lots of energy, especially if they are large and weighted. The leading edges are often quite sharp out of necessity and can cut if caution is not exercised. Avoid catching with one hand and always protect your eyes from damage.

The experienced competitor will always catch his boomerang as close to the ground as possible to gain several extra seconds of flight time as the boomerang drops the last few feet.

Practical Tips

If the above instructions are followed and success is not realized, then have an experienced thrower watch you. More often than not, the beginner has difficulty with a vertical release, and throws with too much layover and without incline.

In competition, do not try to set a world's record on your first throw. Begin with a controlled throw, then try to improve with each successive throw. You can easily lose control by trying to overpower an MTA boomerang.

For extra height, try running before launching, and even jumping at the moment of release. More energy is transferred into the boomerang so that it can climb higher for longer flight durations.

It is important to throw with lots of spin. It is recommended that the boomerang be held with a pinch grip to accomplish this result.

Try juggling two mini-MTA boomerangs with half-power throws. This allows 15–20 seconds between catches so that the less athletic thrower can seriously compete with advanced throwers. MTA boomerangs do not make good jugglers in windy conditions.

Exercise caution when bending the arms to avoid breakage, especially if the model you are using is internally weighted in the vicinity you are applying the bend. Plywood can become quite brittle in cold weather. It is advisable to warm the section with your breath or with steam before applying the bend.

Reduce sideslip or the rocking motion during the descent by changing the relative twist and dihedral between the two blades. Usually, corrections only need to be made to the lift arm because this arm is more sensitive than the dingle arm.

After adding positive angle of attack to the lift arm, decrease the angle of attack just at the tip section to improve stability without significantly increasing the drag forces on this blade.

Do not make any adjustments to the airfoil or the surface finish unless you are an expert. The airfoil chord and planform are aerodynamically tuned and can be quite sensitive to alterations.

The advanced thrower may wish to experiment with an unweighted boomerang by adding weight (lead tape) to the underside of the boomerang. Do not add anything to the upper surface of the boomerang. Lead tape of various thicknesses can be purchased at golf shops. Do not use too heavy a piece, especially with mini-MTA boomerangs, or the sink rate will be too high. After the weight is added, test throw several times and move the weight around until perfect balance is achieved. It is recommended that the weight should be added in the following proportions: 1 unit to the tip of the lift arm; 1 or 2 units to the tip of the dingle arm; and 1 or 2

Learn to read the wind by watching movements in the grass or in the trees. The best time to throw is about 4 to 6 seconds before a gust of wind reaches the thrower. Light gusty winds are potentially the best conditions for throwing MTA boomerangs. Gusty conditions can frequently be experienced in the near vicinity of a cold or warm frontal system. Look for the special days when lots of small puffy (sheep) clouds fill the sky. Gusty conditions are usually found where the shadow of the cloud reaches the ground. On calm days, the best time to throw is mid-morning until mid-afternoon when the thermals are at their peak intensity. Watch to see what time the large migrating birds take to the sky to take advantage of these thermals

On very windy days, locate a field with a tree line to break up the boundary layer of the wind. Try throwing in different locations on the field until you find a location where updraft conditions prevail

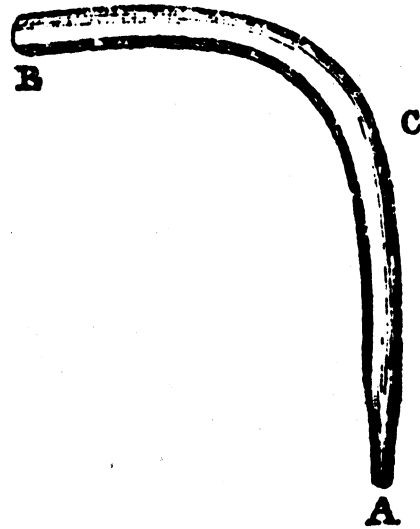
For light wind conditions, find a triangle of a square field surrounded by trees in all directions except from which the wind is coming. Throw near the opening of the field and watch the natural updraft that is present as the air enters the field and is lifted above the surrounding trees. Do not throw your favorite MTA boomerang under these conditions unless you are prepared to lose it with an exceptionally long flight duration.

Conclusion

Don't be afraid to ask more experienced throwers for help. Most are eager for others to become involved in an event that has been open to only a few of the competitors in the recent past. Send in reports of extra long flights to the USBA newsletter. Share your discoveries with others by publishing your experiences. The sport of MTA boomerang throwing is in its infancy and requires the input of all participants if it is to progress to an advanced state. MTA throwing is potentially the most exciting of all the boomerang events. ●

The Boomerang 150 Years Ago

Early 19th century accounts of Australian killer-sticks and boomerangs maintain a fascination for anyone interested in the magic stick. Following is one of these articles by English ethnologist Charles Fox, from the 1839 American Journal of Science. It is entitled: "Some notice of the Kilee or Boomerang, a weapon used by the natives of Australia." Discovered by archivist Barbara Narendra of Yale's Peabody Museum of Natural History, the article was forwarded on to this newsletter by Dr. Leo Hickey, the institution's director



and an enthusiastic boomerang thrower:

"The first notice which I remember to have seen of the weapon, was in a slight volume of travels in Van Diemen's Land, published about four years since in London, but with which I have not been able to meet again. It is there described as made of heavy wood; and, as being in the hands of a native, a very dangerous and powerful instrument of offense. About three years since, some specimens were imported into Dublin, and there soon became such a demand for them, that they have since been manufactured there. They are used by the students at Oxford and Cambridge, to throw for recreation. The specimen now in my hands was imported from Australia; but is evidently intended for England, and is made of light materials which could do little harm should it chance strike any one.

It is of some native wood, and has been either cut out of a branch, having the appropriate bend by nature; or it must have been twisted by means of steam, the vein of the wood following the curve to prevent splitting.

From A, the handle, to B, it measures, including the curve, two feet nine inches. It is two inches in breadth, and about the eighth of an inch in thickness. The upper side is slightly rounded, the lower one is flat. By holding the missile by one end, A, the plane side undermost, and throwing it toward C, as if to hit the ground at thirty yards distance, and giving it, on leaving the hand, a rapid rotary as well as progressive motion, instead of striking the ground, it rises in the air horizontally, sixty or eighty feet, flies around behind the projector, and finally falls near his feet; or if thrown with skill, it may be made to form two circles before coming to the ground. The natives of Australia have attained to such a skill in the use of it, that they can hit objects at a great distance, and procure their food by means of it; but to a foreigner, such a degree of accuracy appears next to impossible." ●

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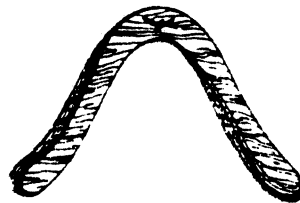
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