



BOOMERANG BULLETIN



BOOMERANG ASSOCIATION OF AUSTRALIA
INCORPORATED

EST. - 1969

Bulletin No.66

April 1990

Welcome to the newly elected
office bearers of the BAA :

President : Roger Perry

Vice President: Rob Croll

Secretary: Geoff Kennedy

Treasurer: Tracey Sinclair

Registrar/Stats: Br Brian Thomas

Editor: Steve Drummond

Sincere thank you to the outgoing
committee for all their work
in 1989.

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* Brother Brian Thomas is still up in the air about a recent throw and catch from a hot air balloon. Some of his best rangs, left on the ground, were nearly crushed by the balloon when it landed; saved at the last moment by a camp quality companion.

* West German throwers it seems are keen to take on Rob Croll, and are threatening to "whip his arse" .. watch out for those West Germans Rob.

* Next issue the boomerang centre fold will be a new West German designed three bladed fast catch rang (I wonder how long it will be before they are

used in Australian competitions?).

* On the subject of fast catch, Rod Jones is said to be working on developing something special in fast catch design. Knowing the quality of Rod's workmanship I reckon the end result will be good value.

* The concept of "Zen and the Art of Boomerang Throwing" recently surfaced in a USA Journal. As I am so easily influenced by the cosmic flux I gave it a try. I hope to write up this story for the next issue. Stay tuned to the sound of one hand clapping.

CAN YOU HELP ?

Brian Kemp is trying to compile a list of all boomerang makers and decorators in Australia for a forthcoming project. It doesn't matter whether they are hobbyists or full-timers, or even retailers it will all help to build up an overall picture. Please don't put it off, contact Brian if you can help:

Brian Kemp
Publicity Officer, V.B.T.A.
Koyama Pottery,
Queenscliff Road
Wallington Vic 3221
Phone (052) 50-1701

Special Thanks to "The Leading Edge" Newsletter of the Free Throwers Boomerang Society for their permission to reprint the article on wood dust. For those interested, this newsletter is available to Overseas subscribers for \$US12 (orders to 51 Troy Road Delaware OH 43015, USA).

Ted Bailey of the USA has also recently announced he will be publishing a new boomerang journal dedicated to the Art, History and Technology of the Boomerang. The new publication is designed so that each issue will be a complete reference document and will be produced quarterly beginning in Summer (Northern Hem.) 1990. Annual subscription \$US18 to Ted Bailey, 9611 Hollyleaf Circle, Cincinnati, OHIO, 45241.

..... The Ed.

RESULTS

BAROOGA COMPETITION 29/1/1990

	Aussie R.	Accuracy	CCID	MTAC	F.Catch	Overall
G. NORMAN	20	1	2	-	-	35.5
J. GIBNEY	35	14	-	-	50.26	93
B. KEMP	22	0 (1st)	11	-	55.61	88.5
C. JOHNSTON	0	7	1	-	-	41.5
R. JOHNSTON	32	8	6	9.64	1.04.52	80.5
B. DOYLE	46	15 (2nd)	10	13.14	32.06	119.5
P. ROBINSON	39	0	8	-	30.73	94.5
J. BYHAM	42	- (3rd)	10	-	(3rd) 30.68	
A. BYHAM	48	-	7	-	42.18	
M. BARASS	(3rd) 50	-	8	-	40.80	
K. MORAN	-	12	-	-	-	44.5
S. MORAN	44 (1st)	22	6	-	30.73	106.5
G. KENNEDY	(2nd) 61	0	8	-	-	96.5
R. CROLL	(1st) 61	1	10	(1st) 17.33	(1st) 21.77	149
M. FULLWOOD	24	0	3	-	36.93	116.5
S. DRUMMOND	2	3	3	(2nd) 17.27	1.20	54
BR. THOMAS	26 (2nd)	21	6	-	(3rd) 29.35	109.5
ARTER	35 (3rd)	18	5	-	36.37	127
N. GOTTSCHALK	0	13	2	6.86	X3	54
R. CLARK	-	8	-	(3rd) 15.17	41.31	78.5
K. CLARK	34	15	-	-	39.93	77.5
R. BARRAS	12	2	5	-	1.26.41	63.5
A. NORMAN	-	-	5	7.83	1.48.29	
S. JOHNSTON	-	-	1	-	1.27	
Mich. BARRAS	-	-	0	-	-	
B. WARD	-	-	1	-	-	
C. NORMAN	-	-	1	-	-	



1989 Gumbyah Competition.

Conditions for the competition began perfectly with barely a breath of wind. There were two new members, Gary and Glen, throwing in the competition and both did well for their first attempt. Gary put up a MTA Unlimited throw of 43.18 seconds, an event he has never done before and gained a place in four out of six events. He is definitely a threat to all those top throwers out there, so watch out!

Rob Croll created three new MTA records with 59.27 sec. on his fourth throw, throwing from the centre of the circle and catching it 43 m away. The boomerang travelled along for about 60m, then as it descended the wind direction changed before the catch. The records were for the MTA 50 World Record, MTA 100 Australian record and the MTA Unlimited Australian record. Aussie Round was very tricky with wind doing 180 degree changes mid throw, resulting in fairly low scores.

There were two fun events. The first event was an accuracy event using a 3 foot long boomerang. The second event required the thrower to throw and catch a boomerang whilst holding on to a 5m rope with one hand.

Report by Rob Croll

JUNIOR COMPETITION

Mich. BARRAS	19	10	-
M. BARRAS	(3rd) 44	12 (2nd)	5
A. NORMAN	22	7	-
Jodie BYHAM	7 (3st)	14	-
A. BYHAM	(2st) 68	6	1
B. WARD	23 (2nd)	18	1
J. BYHAM	(1st) 73 (1st)	28 (1st)	6
S. JOHNSTON	37	4 (3rd)	3
K. JAM	21	13	-

LADIES COMPETITION

T. SINCLAIR	(2nd) 48 (2nd)	15
C. NORMAN	(3rd) 43	4
J. BYHAM	35 (1st)	19
D. KENNEDY	27	6
H. CLARK	(1st) 57 (3rd)	9

1989 GUMBYAH Report by Rob

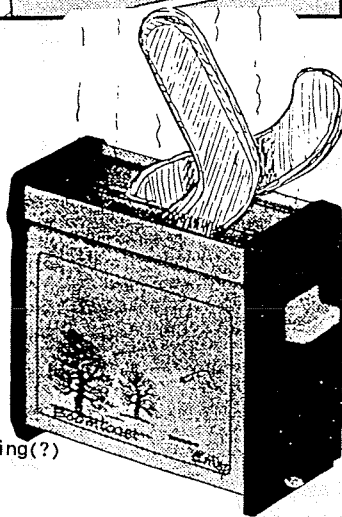
	A.Round	F.Catch	MTA100	Trick C
Rob	(2nd) 40 (1st)	22.86(1st)	59.27	9
Bruce	(1st) 48 (2nd)	25.10(2nd)	36.13	7
Gary	(3rd) 28	40.77(3rd)	29.07	5
Peter	14 (3rd)	31.99	22.56	3
Glen	12	51.17	22.56	4
Mike	22	38.50	19.69	3

Accuracy with 3 foot boomerang 1st Gary
 Throw and catch whilst holding a rope 1st Mike
 Overall winner Rob

Thanks to all those who came along to compete, to those who helped with the timekeeping and Tracy for scoring(?)



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AUSTRALIAN NATIONAL CHAMPIONSHIP 1990

The Australian National Championships were held this year at Brimbank, Metropolitan Park, Keilor, Melbourne under the sponsorship of the Victorian Boomerang Association (VBTA). An excellent venue, once we got in, combined with perfect boomerang weather, added up to an enjoyable day of competition throwing.

The VBTA wish to thank the Read family for their most generous donation of trophies for competition winners and tokens to all other competitors.

Thank also to Charley Johnston for donating the raffle prize, Kayleen Carter for other prizes and to Brian Kemp for arranging for the T shirt National blaze (of which some are still available for sale at \$10 each; see Bruce Carter). Bradley Slater provided the audio system, which kept all informed throughout the day. Trophy winners are as follows:

FAST CATCH:Senior 1 Bruce Carter (21.09)
2 Geoff Kennedy(24.23)
3 Roger Perry (26.94)

Junior 1 Jarrod Byham (39.33)
2 Susan Johnston(82.51)
3 Ashley Byham (104.23)

AUST.ROUND:Senior 1 Bruce Carter (74)
2 Roger Perry (70)
3..Robert Croll (66)

Ladies: 1 Leanne Loveland (50)
2 Carol Norman (22)
3 Joan Byham (20)

Junior: 1 Ben Loveland (48)
2 Jarrod Byham (47)
3 Adam Young (47)

CATCH OF THE DAY Susan Johnston
WOODEN SPOON Charley Johnston
ENCOURAGEMENT AWARD Adrian Cloonan

AUSTRALIAN CHAMPIONS 1990

SENIOR Robert Croll
JUNIOR Jarrod Byham
LADY Leanne Loveland

ACCURACY:Senior 1 Bunny Read (43)
2 Brian Thomas (38)
3 Brian Anderson (37)

Ladies 1 Joan Byham (27)
2 Carol Norman (19)
3 Debbie Kennedy (18)

Juniors 1 Baden Ward (22)
2 Ben Loveland (21)
3 Adam Young (21)

NEAREST THE PIN Paul Bryden (250mm)

MTA: 1 Geoff Kennedy (28.84)
2 Gunther Wandtke (27.73)
3 Trevor Loveland (25.97)

CONSECUTIVE CATCH WITH INCREASED DIFFICULTY

1 Jarrod Byham 10
2 Rob Croll 10
3 Roger Perry 9

ENDURANCE Roger Perry 31

TRICK CATCHING: 1 Leanne Loveland 8
(Ladies) 2 Carol Norman 6
3 Janet Barrass 4

CONSECUTIVE 1 Leanne Loveland
(Ladies) 2 Joan Byham
3 Carol Norman

Junior 1 Jarrod Byham
2 Ashley Byham
3 Ewan Cloonan

COMING EVENTS

29 April 1990 Waverley Workshop and Competition
20 May 1990 Waverley Competition
26 August 1990 Syndall Competition
Early Sept.1990 Australia vs France (In France)
6-7 October 1990 Albury Competition

10th ANNUAL GERMAN CHAMPIONSHIPS.....
 IN BERLIN BEFORE THE WALL CAME DOWN. 1989.

Special report from REINER LUDI.



COMPETITORS: 118 (9 FEMALE)
 COMPETITIONS: FAST CATCH, ENDURANCE, AUSSIE ROUND.
 SPECTATORS: 12,000
RESULTS: 1st Hartmut Steeb
 2nd Ulrich Roos
 3rd Torsten Fredrich

The Championships took place in the parkgrounds of Wedding, a district of Berlin. Because of this, and the publicity made by the promoters, it was possible to have more than 10,000 spectators during the two days. The environmental conditions, boomerang selling stalls, snack bars, show program with kites, juggling, frisbees and boomerangs gave the event a touch of a public festival.

The surrounding of the playground by big trees and the changing wind made the throwing difficult. The best results of the events weren't very good (Fast Catch 28.49s; Endurance 42; Aussie Round 62.). Remarkable is that the winner of Aussie Round threw with a Fast Catch rang (three blader). A development of this beautiful discipline I cannot support. I hope there will be a change in the regulations that the minimal distance of the rangs used in Aussie Round will be increased to 30 metres.

Most of the competitors used two-bladed rangs for Fast Catch and Endurance, although three-bladers are allowed in our rules.

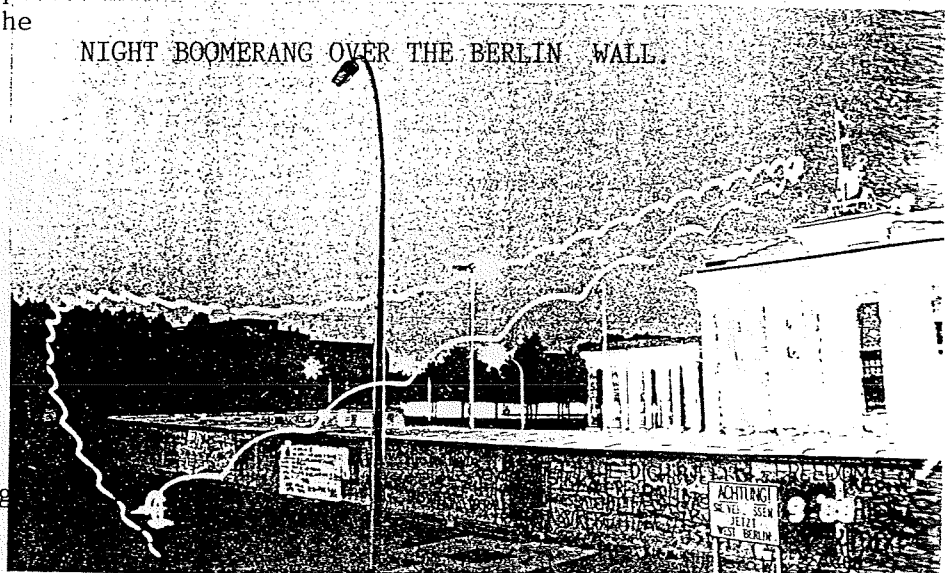
The fourth competition, MTA, has been a victim of the weather conditions, plus the length of the Aussie Round. The throwing with the 118 competitors lasted over six hours. We finished at 4 p.m. The evaluation took another two hours, so that some of the competitors couldn't participate in the victory ceremony, because they had to depart.

Besides this we had some other competitions out of the ratings. The first one, called QUICK FILE had big success with the public. We've been 50 competitors sitting at the 50m circle of the Aussie Round. At the sign from the referee we started to run to our equipment, a FILE and a crude BOOMERANG laying at the 40m circle. The aim was to make a flying boomerang as quick as possible, then run inot the middle circle and to throw the rang and finish with a catch! If you don't catch it, then you run back, turn a somersault, then you try another throw or improve your boomerang. We all had big fun with this competition. The winner was ECKHARD MAWICK, our PRESIDENT!!!

The second one was planned as a competition, but no go, because of the performance of AXEL HECKNER. Let me start from the beginning. The competition was called SILVER BEVEL and only boomerangs in the size of a postcard had been admissible. We had about 20 competitors training, when Axel did his throw with his Makro. I thought that I couldn't believe my eyes when I saw this rang flying. It did a circle of about 60 metres, came back with excellent accuracy and was caught by Axel with one hand! We asked him to throw again and he did the same throw for the second time. After these throws we concluded that there's no need for a competition.

We unanimously declared Axel the winner!

These Championships had been the greatest ever had. But just after the competitions, the discussions in the German Boomerang Club began: -if this kind of event is desirable in the future. The big number of spectators and many reports in the newspapers gave our sport a publicity we have never had before. But there are some disadvantages too. Because of the large number of competitors, there had been long waiting times between the competitions. Never the less we were always lacking referees.



Bumerangs über Berlin

The organizing got very difficult.

An event of this size needs financial support by several sponsors. The costs of our Championships amounted to 40,000DM (about \$30,000 Australian). This is a lot of money.

Because of the increasing number of competitors we will need preliminary decisions for our next Championships.

My opinion to this kind of event is that I would prefer smaller and more familiar competitions. With this big number of competitors you haven't got the chance to become acquainted with the other throwers. The environmental conditions are pushing the sport into the background; it's all show.

Some of us rested for several days in Berlin. It was planned to meet with some throwers of East Germany in East Berlin. We drove in small groups with our own private cars to the frontier crossing point, because we didn't want to be conspicuous. But at the frontier we met all the other guys; it needed more than half an hour to cross it. Within 20 metres we had to show our passport for four times. After some cars the frontier guards recognised that we belong to one another. Some of us had bad luck; they were checked very intensively.

We met again at the home of Matthias Kutschera, where we were expected by the other East German throwers. It needed about another half an hour before we were all complete.

After the welcome we introduced each other and went to the meadow close by. (It was here Br. Thomas and Br. Rod Shoebridge threw boomerangs with Matthias in 1985!)

A short time later we got visited by the Police, in East Germany called VOPO. The Vopos explained that our meeting is notifiable. Matthias tried to notify it some weeks ago, but he got the answer that this is not possible. Therefore he concluded to arrange it without permission. The consequence was the Vopos closed our meeting. We decided to go to Matthias's home; on private ground there is no need for a permission.

In retrospect, and with the knowledge of what happened in East Germany since 9th November, this process is unbelievable. Surely you know the 9th of November was the day the WALL in Berlin between the two German States fell. Today the whole world speaks of the reunion of Germany. At that time, only a thought about this theme was a phantom. The world is changing... let's hope in the right way.

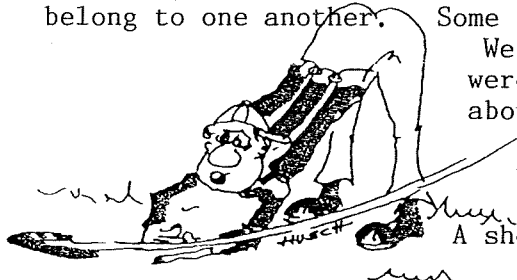
In the last year there has been a big enhancement in the performances of German throwers:

- 1m 15s in MTAC 100 by UDO WENNING 26/27 August, Geneva, Switzerland,
new World Record
- 1m 24s in MTAC 100 by FRIDOLIN FROST 9/10 Sept. Evry, France.
new World Record
- 18.21 secs in FAST CATCH by ULI ROOS, 1st Oct., Hailfingen, Germany.
new World Record

My results last year had been a 36th place in the German Championships, and a 2nd place in Hailfingen. In this competition I won my first competition, Juggling.

Best wishes to all Australian throwers, and thanks for the wonderful time at Barooga in 1988.. to think of it makes me homesick. God bless you all.

REINER LUDI.... GERMANY.

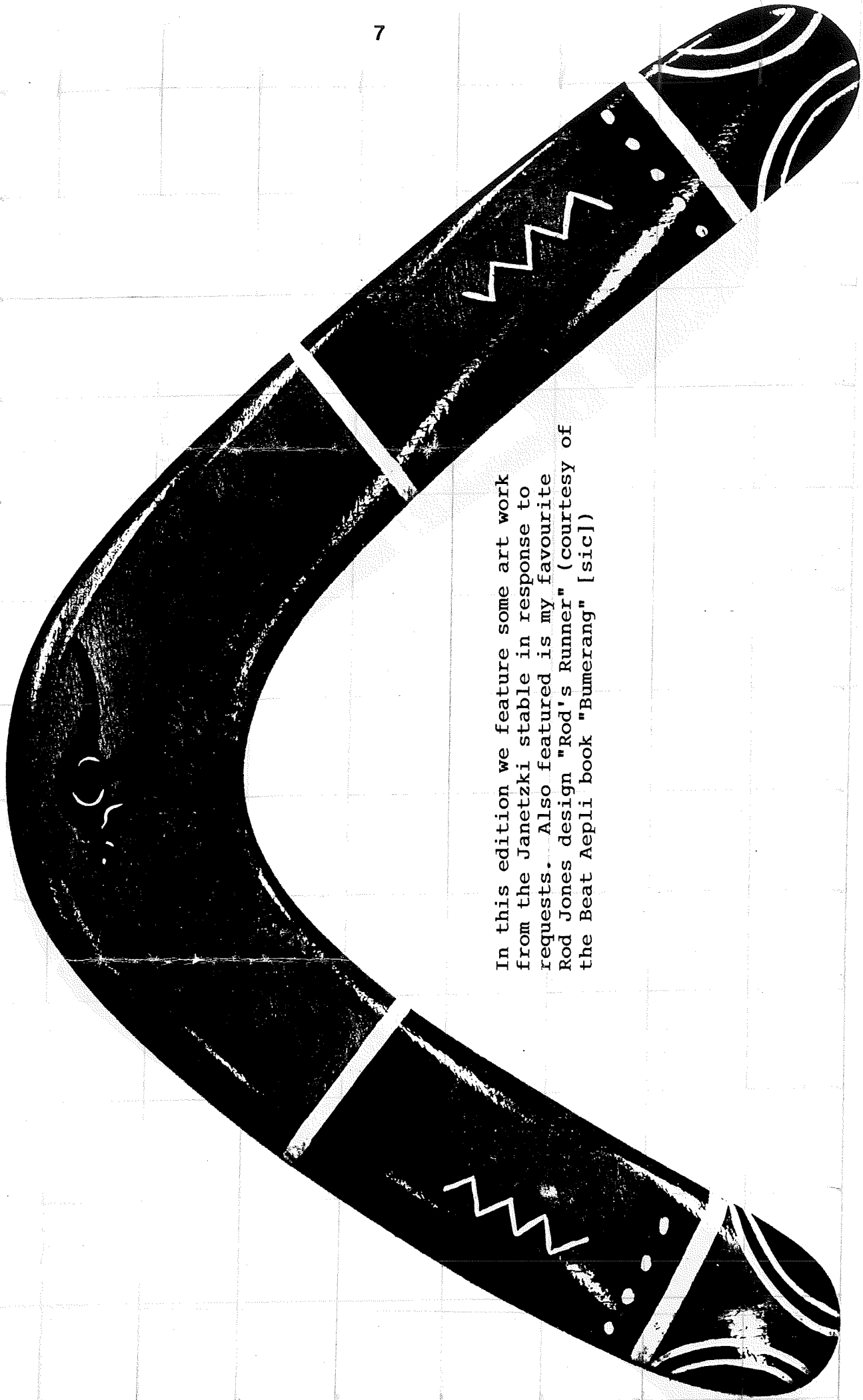


Fast gefangen!

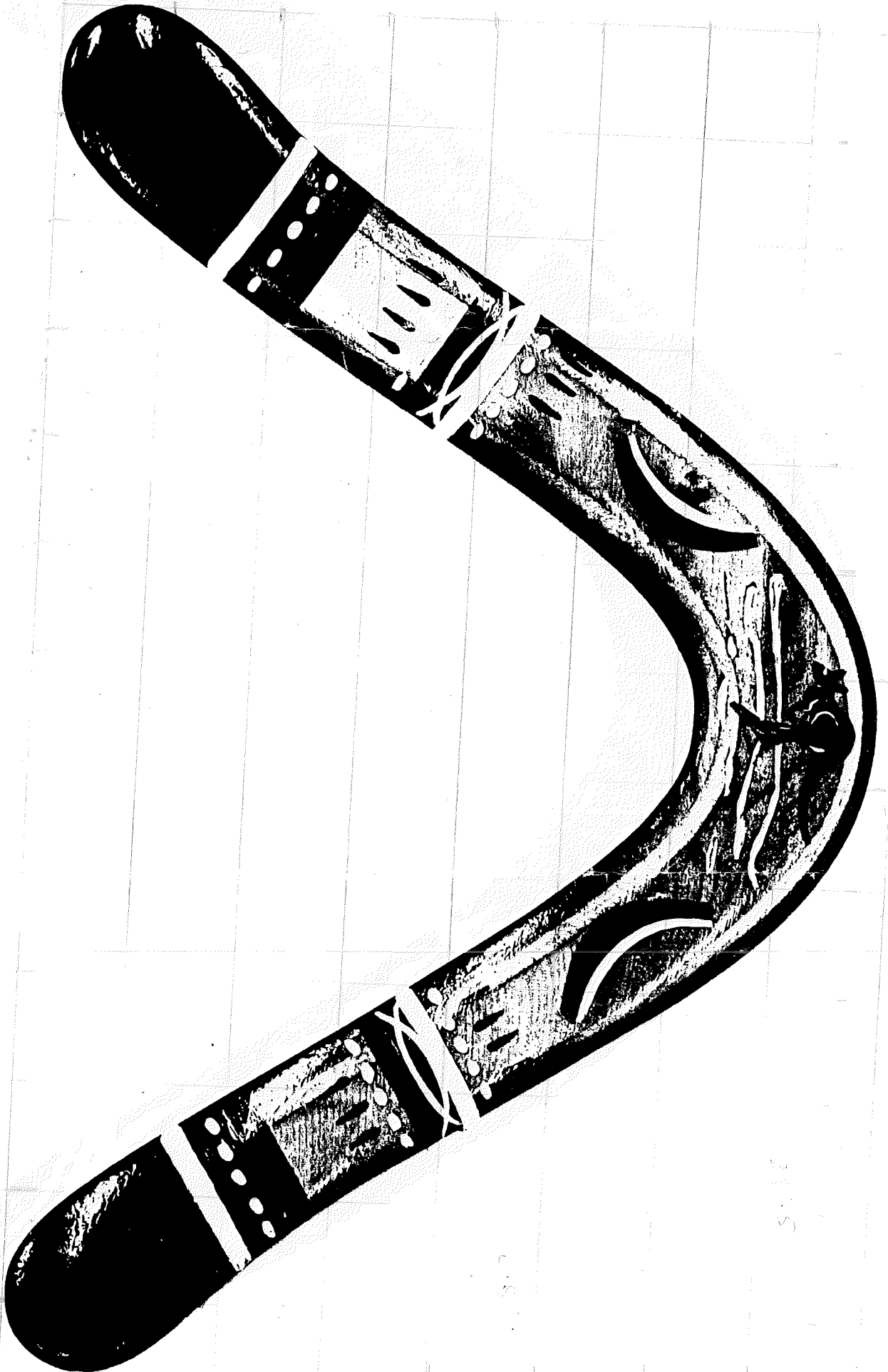


EAST BERLIN
MEADOW
1985

Matthias throwing Maren, 6, in front Ute, wife, next to Br. Rod Shoebridge (under hat) Jurgen Waldheim going to collect errant boomerang!



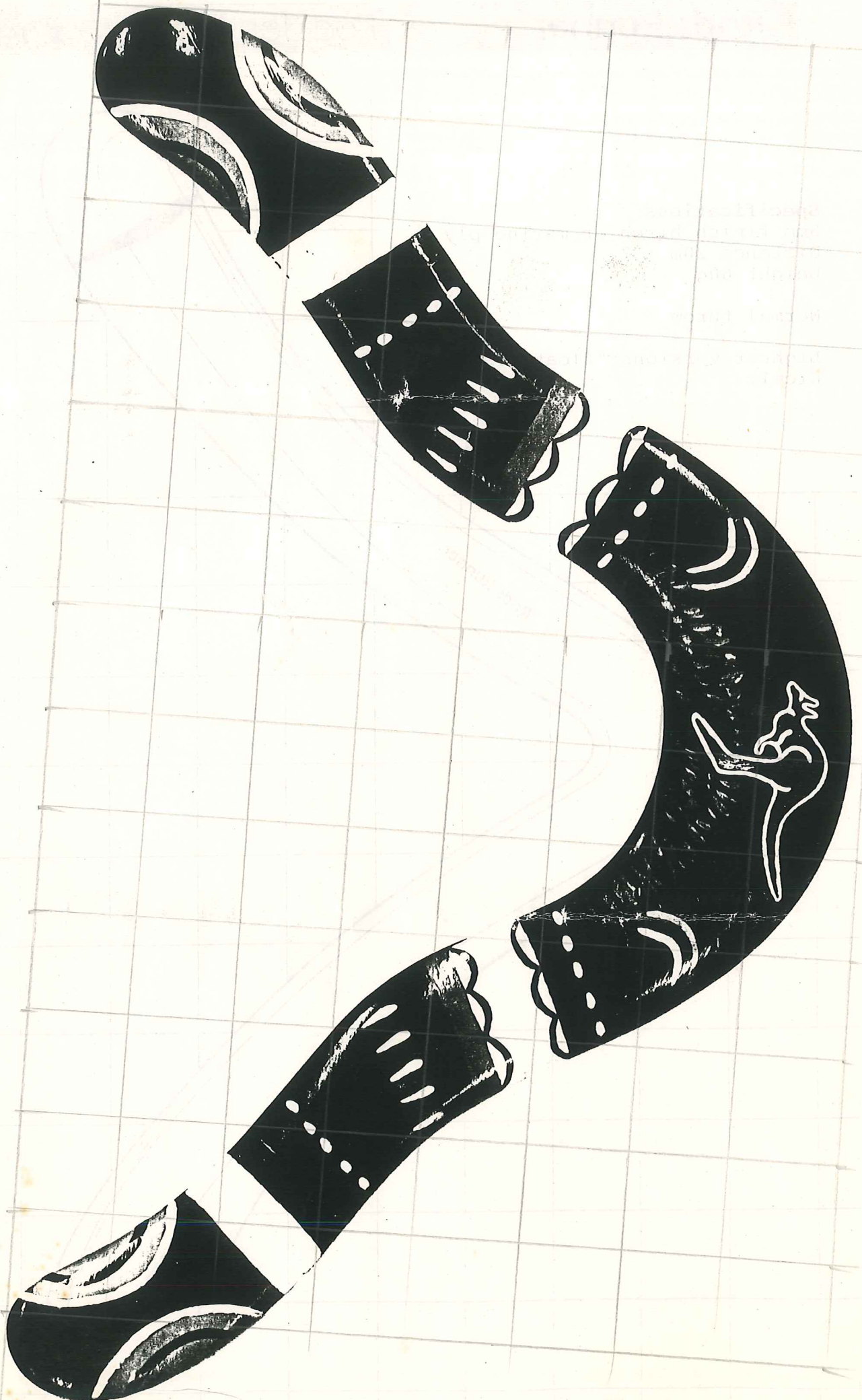
In this edition we feature some art work from the Janetzki stable in response to requests. Also featured is my favourite Rod Jones design "Rod's Runner" (courtesy of the Beat Aepli book "Bumerang" [sic])



250
 300
 350
 400

250
 300
 350
 400

250



Specifications

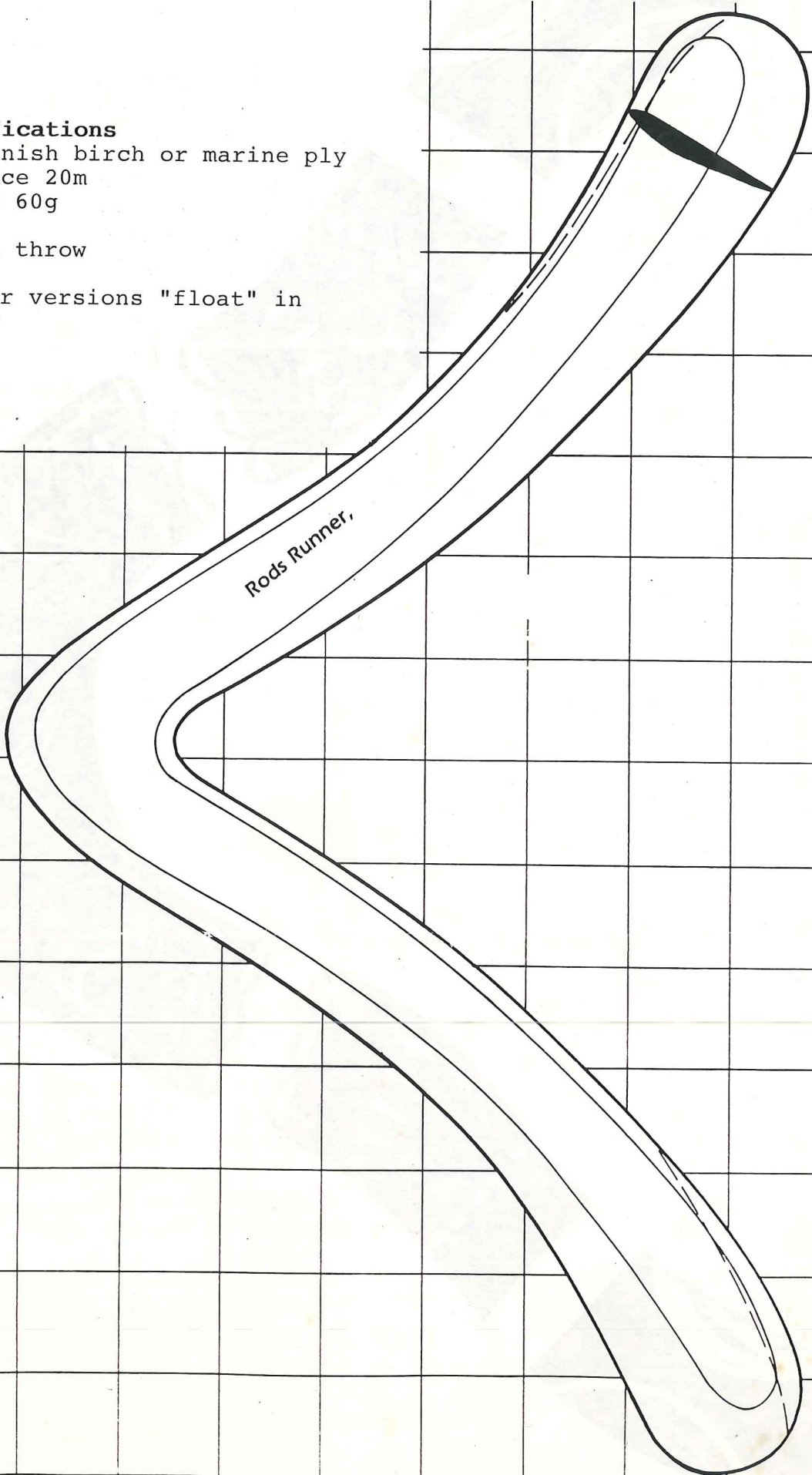
5mm finish birch or marine ply

Distance 20m

Weight 60g

Normal throw

Lighter versions "float" in nicely



2 1/2 cm

SAMPLE COMPETITION:

- 1. Australian Round - A,B,C, U/16's, U/10's
- 2. Accuracy - "
- 3. Fast Catch - "
- 4. M.T.A. - "
- 5. C.C.I.D. - "

EVENTS:

10 x Competitors - 4 x Juniors @ \$2.00	\$ 8.00
6 x Seniors @ \$5.00	\$30.00
	\$38.00
10 x Competitors Certificates @ 30¢	\$ 3.00
25 x Sets small ribbons (1st, 2nd & 3rd) @ 25¢ each	\$18.75
	\$21.75
OR:	
10 x Competitors Certificates @ 30¢	\$ 3.00
25 x Large Ribbons with Logo (1st only) @ 60¢ each	\$15.00
	\$18.00
20 x Competitors - 8 x Juniors @ \$2.00	\$16.00
12 X Seniors @ \$5.00	\$76.00
	\$ 6.00
20 x Competitors Certificates @ 30¢	\$18.75
25 x Sets Small Ribbons @ 25¢ each	\$24.75
OR:	
20 x Competitors Certificates @ 30¢	\$ 6.00
25 x Sets large ribbons with logo (1st & 2nd) @ 60¢	\$34.00
	\$36.00
30 x Competitors - 12 Juniors @ \$2.00	\$24.00
18 Seniors @ \$5.00	\$90.00
	\$114.00
30 x Competitors Certificates @ 30¢	\$ 9.00
25 x Sets small Ribbons @ 25¢ each	\$18.75
	\$27.75
OR:	
30 x Competitors Certificates @ 30¢	\$ 9.00
25 x Sets Large ribbons with logo (1st, 2nd & 3rd) @ 60¢	\$45.00
	\$54.00

COMPETITORS CERTIFICATE

This is to certify that _____

 competed in the _____

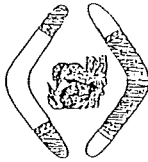
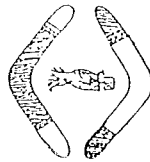
 held at _____

 date _____

Competitor's scores

PLACING
(1st-2nd-3rd-ONLY)

- AUSSIE ROUND _____
- ACCURACY _____
- FAST CATCH _____
- M. T. A. C. _____
- C. C. I. D. _____
- OTHER EVENTS _____



Bill Moore Feature by Brian Kemp

Bill Moore has spent almost 50 years collecting, studying and making boomerangs. Now, at the age of 84, he lives on a farm at Wool Wool near Colac, Victoria.

Bill served in the Australian 2nd/23rd Regiment (Albury's Own) during the World War II and was given his first two boomerangs in Albury just before embarking for the North African Campaign. These boomerangs came from Lake Tyers and were given to him by Conney Edwards. He describes one as being a boomerang and one as a 'glider' because of the way it was trimmed and its long hovering flight. He managed to get another boomerang in Perth whilst en route and he threw this wherever he could until it was broken at Beersheba.

Bill fought at El Alamein and was taken prisoner and worked in the mines in Germany until he was repatriated.

On his travels around Australia, usually on his motorcycle, Bill has collected, and borrowed boomerangs wherever he could and has had castings taken from them in iron, brass and aluminium. The oldest boomerang he has a cast from was made in 1895 and he also has a casting of a very early La Perouse boomerang. Bill uses these as models for his natural wood boomerangs.

The Moore family originally came from Panmiure in the Warnambool district and moved to Wattle Hill near Moonlight Head where they ran the one and only Hotel. The surrounding Otway Ranges abound in native timbers and over the years Bill has collected tree roots over a wide area. Now his many relatives collect likely pieces for him from all over Australia. One piece of red gum was retrieved from under the water in the Murray River and could be hundreds of years old.

He uses his lower leg and foot as a rough guide to the angle he needs and if the root approximates

this angle it has potential to make a good boomerang. he has used many timbers including red gum, blue gum, messmate, black wattle, tea tree, yellow box, apple willow etc, but prefers blackwood. His niece jokingly says that if a passing dog stood still long enough "Uncle Bill would have its hind leg off for a boomerang". To soften the wood for working he leaves the rough elbows in various cattle troughs around the property. When he is ready the elbows are cut into slices for shaping. At one time he used a power band saw but he has gone back to his much loved handsaws, his favourite being a large meat saw that has no set on the teeth.

Various models have differing balance points marked on the back near the elbow. This is determined by balancing the rough formed shape on the blade of his pocket knife. He uses a wide range of rasps to shape the aerofoil on the wings and he carves the dihedral or bend into the lifting arm so that it is permanent rather than bend it in later. Most of the finishing is done with his trusty pocket knife as he scrapes away the surface. The boomerang is cradled along the left arm as he scrapes and smooths the wood. At this stage it is a case of test throw and refine the shape and his numerous dogs prove very helpful at retrieving wayward boomerangs.

Bill rarely treats the wood with paints or varnishes, preferring to leave the wood in its raw state. Occasionally he uses eucalyptus oil to prevent cracking or kerosene to discourage borers. Usually a finishing rub with sandpaper is sufficient for him.

Each boomerang has the initial "M" marked on the front at the elbow and an arrow at the tip of the trailing arm. Most have the details on the back as to when it was made, the wood used and the original design from which it was styled ... not directly copied. If Bill wants any decoration he uses an old long drill bit which he heats and uses to burn the design into the wood.

His workshop is an old wooden caravan cum trailer that sits out in the paddock tilted at a precarious angle and surrounded by rejected roots and other debris. He squats on a cushion on the floor and uses a vice bolted onto a huge block of wood to hold the work. Outside the door is an antique wooden jawed vice that allows him to work outside in the sun and look out over the vast expanse of Lake Corangamite.

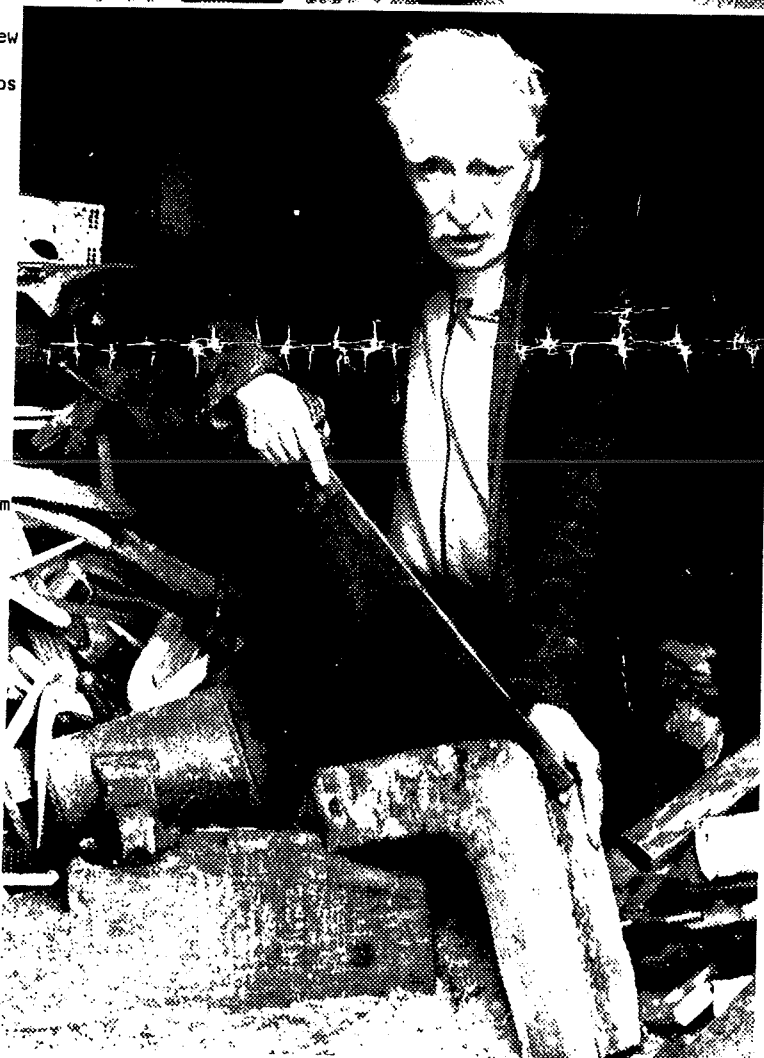
If you ask to see some finished examples Bill is likely to drag out three or four huge sacks bulging with boomerangs and tip them out at your feet. He can tell you the history and inspiration for each one and the different grips and style of throw required. Among them you are likely to come across originals made by Bill Onus, Frank Donellan, Jack Byham, Chook Mullet, Granpa Mullet, Harold Hayes, Jackie McRivers etc ... the greats in Australian boomerang making.

Some of the more recently made boomerangs have never been thrown because Bill says he is getting a bit old for throwing although he just can't stop making them. Bill is also an avid collector of new items and anything he considers newsworthy he clips from newspapers and magazines and pastes into scrapbooks. Photographs or articles to do with boomerangs are featured throughout these numerous scrapbooks and photo albums and because of this Bill has been able to make contact with boomerang enthusiasts all over the world.

It saddens Bill that none of his family have inherited his compulsively urge to make boomerangs but they all keep looking for suitable wood for him and they enjoy throwing the results of Bill's craftsmanship.

As for Bill, he is never happier than when he is talking about his beloved boomerangs.

Good on you Bill and thanks Brian for the great article Ed.



Safety

The following article by Dr. Fredrick Malmberg recently appeared in the US Boomerang Publication "Many Happy Returns".

"OF SAWDUST AND PHENYL RESINS"

Dr Fred Malmberg is a boomerang enthusiast from York P.A. He has been sharing health related articles specific to the boomerang maker and participant with us:

Let me start by noting that OSHA (Occupational Safety and Health Administration) has set new federal guidelines for dust levels in woodworking shops employing any workers. These standards limit wood dust in the air to 5 mg per cubic meter of air for hardwood and softwood dust generally, and 2.5mg per cubic meter for Western Red Cedar. Yes, these are rather specific limits, and no, there is no way for you to estimate the level in your shop, without expensive test equipment. There are two ways to view these new limits: First is that if you never have anyone work for you in your shop, these limits don't apply to you. Second, though, is that since these limits exist for dust levels for employees, I'd like to know that I'm not exceeding those limits for my own shop. Remember, you're hobby shouldn't kill you Either quickly or slowly. Sawdust can kill you. Slowly, usually; but it can get you. OSHA doesn't get laws passed on fleeting whims, you know.

How exactly does sawdust kill you? The two major ways are by the nature of the sawdust, and the size of the particles involved.

1. Nature of the sawdust. Certain materials are known to cause fibrosis (scarring) in the lungs. Asbestos, almost every fiber-plastic known to man, virtually every type of tropical (and some native) wood, etc, fall into this category. The fibrosis occurs in the supporting tissues in the lungs, which in turn, contracts around the vessels of the lungs. When arteries are not allowed to expand, intra-arterial pressures rise (in some cases drastically so); the right ventricle hypertrophies (enlarges), and may fail. (You are now dying). This also occurs in such wonderful diseases as syphilis, TB, and Anthrax. The wood we use ... birch ... is not known to be particularly noxious, as a substance. But it can hurt you another way ...

2. The size of the sawdust. To understand this point requires a review of anatomy. The alveolus (plural alveoli) is the functional unit of the lung. This is where the air

meets the blood, and is carried back to the heart, to be pumped to the body (left atrium to left ventricle to aorta). Think of the alveolus as a tube sock.

A) Now think of a basketball. It won't fit in the sock. Large particles will be filtered out in the nasal passages, etc. No (or almost no) particles larger than 4-6 microns in diameter reach the lungs. I called these "large". Don't forget, this is a relative term. One red blood cell is larger than this size, so even our "large" particles are very, very small.

B) Now think of a golfball. It will easily fit in and out of the tube sock. But if you leave it in the sock and try to use the sock, it will hurt you. Most very small particles (less than 0.5 microns diameter) usually remain suspended even in the alveolus, and goes back out with the expelled air. Notice, I said usually. The particles of cigarette smoke are about 0.3 microns in diameter. They get to the alveolus with no loss to the nasal passages, and 2/3 or more are returned to the expelled air. Those not returned are entrapped in the alveolus and removed by microphages (white blood cells). If repeated numerousness times, fibrosis starts to occur in the walls of the alveolus. This functional unit becomes less functional, and then non-functional.

C) Now think of either a tennis ball or a baseball. With a little effort, either will fit in the tube sock. Neither will come out easily. The size is just right to hold the ball in. This medium-sized particle will also hurt your alveolus. This one does not even give you the option ; it comes in and stays. These are the truly dangerous particles to your health. Even the greatest country bumkin has breathed in some of these particles. Obviously, city dwellers breathe in even more. The key to healthy living is the relative amount. You can't avoid what you have already breathed in, but you can influence the future air you breathe. What this means is, if you make a lot of sawdust, collect it before you breathe it. I can make a boomerang, start to finish (excluding paint, etc) in under 30 minutes. I sure can't do it without electricity, in that time. If you're using power equipment, especially sanders, you are sending all sizes of dust particles everywhere. All over your workshop. If you don't breathe it in today, you will tomorrow. My advice is to make a dust collector your next purchase, if you don't have one already. A good one sells for about \$300 and useable ones around \$200.

Think of the expense this way No other power equipment you could buy (with even 3 times .. or 30) times can help you save your lungs. Remember your hobby shouldn't kill you.

Re: the phenyl resins used in plywood manufacture and whether the resins themselves pose a health threat when cut and carved and spewed into the air by boom builders, Malmberg discovered the following:

Two different types of glue are used in plywood manufacture. For outdoor types (marine grade, aircraft grade), the glue used is phenol formaldehyde resin. This combination is quite stable. No known health hazards here.

However, the indoor type plywoods (baltic birch, cabinet grades), use a type of glue known as urea-formaldehyde. The hazards with these glues are more serious. The problem was first noted in trailers, which have good insulation but little air-exchange with the

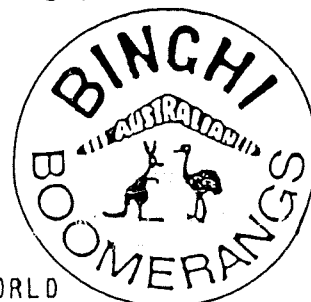
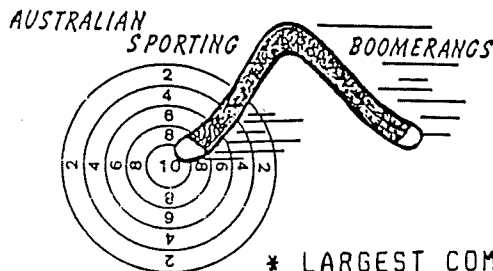
outside air. The formaldehyde was leaking out as a gas from the glue, through the porous wood and was a serious problem (unless vented). Surprisingly, no studies have been done to show whether there is more release of formaldehyde as by cutting the plywood, versus having it just sit there. But realise, if there is added risk with cutting through these resins, we're in bad shape. The more plies to the wood, the more resin and greater the risk. However, since we don't know if a problem exists, the best defense is a good external ventilation. Vent the room to the outside if you store lots of indoor grade plywood. Formaldehyde is a known carcinogen Booms aren't worth that.

Editors note: This article was of special interest to me as about one year ago I became very ill from breathing marine ply dust; I still feel the effects to this day even through I have taken several precautions since to avoid breathing the dust.



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