

# BMC



# NEWS

*Official Journal of the  
British Milers' Club*

VOLUME 3 ISSUE 14  
AUTUMN 2003





# The British Milers' Club

Sponsored by NIKE

Founded 1963

## NATIONAL COMMITTEE

President	Lt. Col. Glen Grant, C/O Army AAA, Aldershot, Hants
Chairman	Dr. Norman Poole, 23 Burnside, Hale Barns WA15 0SG
Vice Chairman	Matthew Fraser Moat, Ripple Court, Ripple CT14 8HX
National Secretary	Dennis Webster, 9 Bucks Avenue, Watford WD19 4AP
Treasurer	Pat Fitzgerald, 47 Station Road, Cowley UB8 3AB
Membership Secretary	Rod Lock, 23 Atherley Court, Upper Shirley SO15 7WG
BMC News Editor	Les Crouch, Gentle Murmurs, Woodside, Wenvoe CF5 6EU
BMC Website	Dr. Tim Grose, 17 Old Claygate Lane, Claygate KT10 0ER

## 2001 REGIONAL SECRETARIES

Coaching	Frank Horwill, 4 Capstan House, Glengarnock Avenue, E14 3DF
North West	Mike Harris, 4 Bruntwood Avenue, Heald Green SK8 3RU
North East (Under 20s)	David Lowes, 2 Egglestone Close, Newton Hall DH1 5XR
North East (Over 20s)	Phil Hayes, 8 Lytham Close, Shotley Bridge DH8 5XZ
Midlands	Maurice Millington, 2 Varteg Terrace Cwmavon, Pontypool, NP4 8UR
Eastern Counties	Philip O'Dell, 6 Denton Close, Kempston MK
Southern	Ray Thompson, 54 Coulsdon Rise, Coulsdon CR3 2SB
South West	Mike Down, 10 Clifton Down Mansions, 12 Upper Belgrave Road, Bristol BS8 2XJ
South West (Devon and Cornwall)	Chris Wooldridge, 37 Chynowen Parc, Cubert TR8 5RD
Scotland	Messrs Chris Robison and Brian McAusland, Ard Bruach, School Brae, Lochearnhead FK19 8PR
Wales	Steve Mosley, 95 Beale Close, Danes Court, Cardiff CF5 2RU..
Northern Ireland	Malcolm McCausland, 11 Iveagh Park, Prehen, Londonderry BT47 2PR

## CHAIRMAN GRAND PRIX COMMITTEE

Tim Brennan, 6 Belmont Drive,  
Maidenhead SL6 6JZ

## TECHNICAL ADVISERS

- David Iszatt, 27 Selly Wick Road, Selly  
Park B29 7JJ
- Ollie Wright, C/O Frank Horwill as  
above
- Rod Lock, 23 Atherley Court,  
Upper Shirley SO15 7WG
- Liam Cain, 8 Foxley Grove,  
Digswell AL6 0DW
- Roger Williams, 53 The Greenway,  
Uxbridge UE8 2PL.

## COVER PHOTOGRAPHS

Top: Paris, 23.8.03.  
KELLY HOLMES (397).  
Bottom: Paris, 27.8.03.  
HAYLEY TULLETT (410).  
By Mark Shearman

## PRINTERS

Beacon Printers (Penarth) Ltd.  
Leyshons Buildings, Cornerswell Road,  
Penarth, Vale of Glamorgan CF64 2XS  
Tel: (029) 2070 8415  
Fax: (029) 2070 3754  
e-mail: beaconprinters@aol.com

# Contents . . .

Chairmans' Notes . . . . .	1
No Iron, No Oxygen, No Athlete . . . . .	2
Astounding Astrand . . . . .	3
Pontificators . . . . .	4
Paris 2003 . . . . .	6
My Trainging of a World Class 800m Runner . . . . .	8
Mind Games . . . . .	15
Statistics 2003 . . . . .	16

## BMC to repeat cross-country venture-----come and try it !!!

The BMC is to repeat its successful first venture into c-c promotion when it stages its second 4k Short Course championship on Clifton Down in Bristol on Sunday Nov16(12 noon).

Like last year the men's and women's races will be promoted in conjunction with Bristol Athletic Club's traditional Mike Sully and Gemma Butler Cross-Country Classic.

Last year Rob Whalley, (three times National 4k champ.) won easily from Chris Moss and James Thie. The women's race was won by Heidi Moulder from Catherine Dugdale and Lucy Vaughan.

The fast, but testing, 1k lap, opposite the Zoo on Bristol's famous Downs, and only a stone's throw from the City centre, was given the thumbs up by virtually everyone who ran last year. Rob Whalley stated it would make an ideal national 4k course. James Thie was equally enthusiastic and urged fellow middle-distance runners to give it a go. He pointed out that the BMC were filling the void facing middle-distance runners in the early winter.

As last year the BMC will put up the prize money, which will match the Nike Grand Prix in the summer, with £100 for the winners, £75 for second, £50 for third and £25 for fourth.

The BMC were somewhat disappointed with the turn-out for the Young Athletes races which they would like to develop like the May Day meet at Millfield attracting many of the leading young middle-distance runners.

The BMC are therefore, this year, going to experiment by using the Schools age groups as a counter to the majority of the other pre-Xmas events. If successful it could develop into an inter-county championship. To encourage block school entries the Bristol Club have decided to award special trophies to the top boys and girls schools, the results being calculated on a school's best six positions across the four age groups. A format used some time ago in the Sunday Times National Fun Run.

The Mike Sully meeting used to be the biggest open event in the country held before Xmas, with younger age group races being "National" rehearsals. Bristol, together with the BMC, are keen to have it regain this status.

Full details are available from the BMC or Bristol websites([www.bristol-ac.co.uk](http://www.bristol-ac.co.uk)) or Mike Down(Meeting Director and BMC co-ordinator) on 0117-9733407, while entries can be made via BMC([steve.mosley@lineone.net](mailto:steve.mosley@lineone.net)) or to Dave Bedwell at 14, Coombe Bridge Avenue, Bristol BS9 2LI



# Chairmans' Notes

12 months ago I reported that during 2002 Summer season we had many areas of progress for the UK Middle Distance Events. I can now also report that 2003 witnessed the best ever season for the BMC/Nike GP Series on many types of measure. These include such things as average winning times and the times achieved by the top placed UK athlete in each of the races.

The highlights of the 2003 BMC season which remain in my mind include the 1:46.68 win, by Ricky Soos, in the mens 800m at Watford, the dramatic finishing burst produced by Danielle Barnes when winning the womens 1500 in 4:15.0 at Wythenshawe, the fastest 10k run in the UK for 8-9 years when Fabian Joseph of Tanzania won at Watford in 27:32.81, Andrew Graffin's brave front run to win the mens 1500 at Eton and Chris Thompsons excellent 13:34.93 to win the mens 5k, also at Watford.

Of the five athletes I have mentioned it is interesting to note that three of them, Ricky Soos, Danielle Barnes, and Chris Thompson are only at the beginning of their international careers. Many more great things are to come from them in the future. I am also sure that the highly talented pool of emerging youngsters seen in many of our 2003 competitions also holds a few who will do the same very shortly.

Although we can claim that our womens middle distance and endurance events are already making an impressive mark at World level the signs for them and the men are beginning to look even healthier for the future. In order to offer this emerging talent appropriate levels of competition you will know, from previous editions of the BMC News, that your Committee has worked hard to gain more Saturday dates for our GP Series. The 2003 Wythenshawe GP was held for the first time on a Saturday and the response, especially from the younger athletes, was tremendous. Athletes



Dr. Norman Poole, Chairman

travelled from all corners of the UK and unfortunately we had to reject a large number of entries. The entries were up to full capacity a week before the Meeting !! For the 2004 season are aiming for all of the five GP meetings to be held on Saturdays and we realise that the event entry standards may have to be raised. I hope that those of you who do not gain an entry into GP competition will continue to commit yourselves to the regional events in order to improve your pb's.

Within the regions, both the Trafford and the Watford BMC competitions have continued to provide many excellent racing opportunities throughout the 2003 season. The organisers of these hugely successful meetings, and in particular Mike Harris at Trafford and Paul Odell at Watford, are to be congratulated for their own personal endurance capabilities and years of service in the cause.

The same has to be said of Mike Down, organiser of the annual Young Athletes Millfield Meeting. The 234 pb's achieved in the 2003 meeting must be a record for any athletic event in the UK.

Chris Carter's recent introduction to organising BMC events, at Brighton on Aug.13th, has to be admired. The winning

time of 1:48.3 by Chris Reynolds in the mens 800 was a fine achievement but Chris Carter has indicated that his aim for the future is to organise a competition in which an athlete will beat his pb of 1:46.3. We hope that you manage it Chris.

Malcolm McCausland came very close to achieving Chris Carter's target when Ismael Ahmad of the Sudan ran 1:46.6 on Aug.1st at Bangor in Northern Ireland. Well done Malcolm.

Through no fault of our own the 2003 fixtures did create a number of unhelpful clashes with our own GP meetings. Once again we are negotiating for the 2004 dates with the UKA personnel responsible for the 2004 fixture list. Apart from requesting meaningful dates for our GP's we have once again firmly asked that our Meets do not clash with the BAL and UKWal dates. We will probably find out if our requests have been met by the end of 2003.

Since 1997 we have witnessed the sad demise of both the UK National Endurance Conference and the Senior Coach Event Specific Week-end. This has brought about the even more pressing need for a new venue at which our coaches can learn from the experiences of those who have achieved success at the highest level. On Oct 11th in Birmingham we staged, in conjunction with UKA, a one day Coaching Symposium, at which Ian Harris, coach to 2002 Commonwealth 800 Champion and World Champion bronze medallist Mbulaeni Mulaudzi, presented a paper. Dave Sunderland is to be congratulated on organizing this event at which 80 coaches were in attendance. It appeared to me that there was a great spirit of cooperation between. This was further emphasised during the coaching clinics. The BMC Committee will investigate the possibility of further developing this vital aspect of coach education during the coming year.

## Editors Notes

Readers will note, I regret to say, of the continuing paucity of contributors in the magazine. Frank Horwill continues to provide the greater part of the content and it is surely a pity that from the very substantial number of BMC members that there are so very few who feel unable to submit something for publication. I have chosen to highlight, in this issue, the across the board (at all age levels) success of the GB ladies this past track season. At the various International Championships they have performed with rare distinction. This is not to denigrate the achievements of a numbers of outstanding young men but to acknowledge that this year, at least, the girls have it.

## Olympic Games: Qualifying Performances

The "A" standard times for the middle-distances are understood to be as follows:-

Mens 800	1:46.00
Mens 1500	3:34.90
Womens 800	2:00.0
Womens 1500	4:05.80

Given that the qualifying period commenced 1.1.03 then the U.K. have already a number of people with the required standard. James McIlroy, Kelly Holmes(both), Hayley Tullett and Jo Pavey. In addition the standard would, on the evidence of the 2003 season, look to be within reach of several others, especially at 800.

Early season opportunities, BMC races?, need to be found for the these hopefuls. Given the number of events in which the U.K. does not look likely to provide any competitors it would be real fillip for the BMC to be able see a full complement in all four events.



# No Iron, No Oxygen, No Athlete

When we run we breathe in oxygen which goes into the lungs thence into the air sacs, where it is diffused into the blood. In the blood there are oxygen-carriers collectively known as HAEMOGLOBIN, largely made up of iron. One gramme of Hb conveys about 1.34cc of oxygen. A fair reading for females is 13.5 g/100mls, for males, 14.5g/100mls. However, Kenyan athletes are often found to possess 2grammes more per 100mls. This is an obvious advantage. It's a fallacy that when Hb levels are low all you have to do is to take some iron pills. In fact, iron on its own is practically useless, and excessive iron on its own is known to help breed infectious bacteria. If iron could speak it would say, "I DON'T WANT TO WORK". The red cells that carry your oxygen called ERYTHROCYTES make up 35-50% of your blood, the rest is mostly plasma. The proportion of your blood made of red cells is measured by the HAEMATOCRIT. This must be boosted. Each red cell is 25-35% HAEMOGLOBIN. A 10 per cent drop in Hb can reduce performance by 20-25%. Similarly, a 10% increase can improve performance by the same percentage. The male uses 1.0mg daily for bodily functions; the female - 1.5mg. Sweat causes a 1.5mg loss daily and COMPRESSION HEMOLYSIS as the foot hits the ground causes 1.0mg loss daily. The total loss of iron is therefore - Male - 3.5mg. Female - 4.1mg. We have a problem here, only 10 per cent of the total iron we consume in any 24 hours is used. Therefore, the male needs to take in 35mgs of iron daily, and the female 41mg. ~~THE RDA IS~~ NEARLY THREE TIMES THE RDA(Recommended daily allowance, frequently called ROTTEN DAMNED ADVICE). The average diet contains 6mg of iron per 1,000 calories. To get that amount requires a massive food intake or CAREFUL PLANNING.

Iron requires the presence of folic acid, zinc, vitamin B12, vitamin B6, vitamin C and vitamin E, to be fully absorbed. Folic acid, B12 and B6, also help boost the manufacture of new red cells. The following foods need to be consumed with practically every meal:-

IRON - Curry powder, black pudding, liver, cocoa, corned beef, lentils, haricot beans, oatmeal, dried peas, dried apricots, dried figs. The iron in vegetables is not so available as the iron in meat.

FOLIC ACID - Liver, beans, lentils, broccoli, spinach, green leaves, eggs, whole grain cereal.

ZINC - Nearly all types of nuts, oysters, lean beef, egg, milk, pork, turkey, wheat bran, wheat germ, lamb, soya beans.

VITAMIN B12 - Liver, kidney, meat, milk, fish, eggs, clams, flounder, herring, mackerel, sardines, snapper. NOTE - THIS VITAMIN IS NOT FOUND IN VEGETABLES, IF YOU ARE A STRICT VEGETARIAN YOU MUST TAKE THIS AS A SUPPLEMENT.

VITAMIN B6 - Avocados, bananas, lentils, carrots, rice, salmon, tuna.

VITAMIN C - Pure orange juice, oranges, black currants, broccoli, sprouts, cabbage, grapefruit, potatoes, rose hips, tomatoes, watercress.

VITAMIN E - Almonds, hazelnuts, walnuts, margarine.

The body's true measure of iron stores is SERUM FERRITIN(Males - 30-160ng, females - 25-100). While the Hb may be normal, the serum ferritin can be low, this will affect the manufacture of new red cells. IF NOT CORRECTED QUICKLY PERMANENT DAMAGE MAY BE CAUSED TO THE BONE ENDS THAT PRODUCE RED CELLS. There is also evidence that a low count increases the injury-rate three-fold. The above stated combination of vitamins and iron will correct this.

Health food shops sell an iron capsule called QUEST that contains the RDA for all the nutrients which make iron readily absorbed.

LEGAL IRON BOOSTING carried out by the Colgan Institute of Sports Nutrition has proved highly successful and expensive! For 12 weeks, the following are taken before a major event:- Folic acid - 2.4mg, vitamin B12 - 100mcg, vitamin B6 - 150mg, vitamin C - 500mg, iron - 48mg, zinc - 60mg. The subjects on this formula increased their  $VO_{2max}$  from 8-18%(Lowest to highest). The cost is about £35 a month to buy all the ingredients. THERE MUST BE A 14 DAY BREAK AFTER CONTINUAL USE FOR 12 WEEKS. Folic acid is normally sold in microgrammes, ask for the highest brand and how many are required to make 2.4mg. Folic acid is the MAIN ingredient in this formula next to iron. THE END

Compiled by Frank Horwill - June 2003.





# The Astounding Astrand

Much has been made of the physiologist Veronique Billat's "discovery" in two athletics journals of a session that boosts both the  $\dot{V}O_{2\max}$  and lactate threshold. She advocated a one-off 6-minute maximum effort run (This will be around 3k pace) and then after suitable recovery, running half the distance achieved in 3-minutes x 6 with 3-minutes recovery. The 6-minute run is only done once a month to judge fitness gains. Once the athlete can handle 6 x 3-minutes comfortably, the next step is to reduce the recovery time by 15-seconds a time until it's halved(90secs). Here is an example:-

Huw runs exactly 2,000m in 6-minutes(72/400). Once a week he runs 6 x 1k in 3-minutes with 3-minutes rest. After two weeks it gets easy, so he reduces the recovery to 2mins.45secs. and keeps reducing it each week until he has only 90-seconds rest. He then does another 6-minute full-out run and improves to 2,200 metres. He now starts with 6 x 1,100m reps(3mins with 3mins.recovery.

A reminder that the lactate threshold is the speed of running reached which causes a sudden increase in lactic acid production. Quite clearly, if this occurs at 12mph, it is better than it happening at 10mph.

Now, Billat's findings are an adaptation of Astrand's work done 30 years ago, and Dudley's research done 20 years ago! Astrand was more expansive, using three duration runs: 1) 5-minutes. 2) 4-minutes. 3) 3-minutes. He was also more liberal with the types of sessions. All the durations listed are initially maximum effort runs. Then, THE SAME DISTANCE ACHIEVED IS RUN AT DIFFERENT PERCENTAGES OF THE TIME. Let us take the 5-minute(300secs) effort first: Alice runs exactly 1600m in 5mins. She now has a choice of percentage of the time. She decides in October to run the 1600m distance six times 20 per cent slower, 20 per cent on top of 300-seconds is plus 60-seconds = 6mins/1600 x 6 with 30secs rest. In November she opts for 10 per cent slower(300secs + 30secs), and does 5 x 1600 in 5mins.30secs with 60secs rest. And in December she goes for 5 per cent slower(300secs + 15secs) and does 4 x 1600 in 5mins.15secs with 90secs rest. This is virtually at her best 3k speed. She now decides to try her hand at the 4-minute maximum run and covers the distance of 1400 metres. She repeats the process:-

80 per cent effort is 240secs + 48secs = 1400m x 6 in 4mins.48secs 60secs rest.

90 per cent effort is 240secs + 24secs = 1400m in 4mins.24secs x 5 with 2mins rest.

95 per cent effort is 240secs + 12secs = 1400m in 4mins.12secs x 4 with 3mins rest.

Finally, Alice in April does a 3-minute maximum effort run and covers the distance of 1,100 metres and follows the same routine but reduces the number of reps. and increases her recovery time as follows:-

80 per cent effort(180secs + 36secs) = 1,100m x 5 in 3mins.36secs with 2mins rest.

90 per cent effort(180secs + 18secs) = 1,100 x 4 in 3mins.18secs with 3mins rest.

95 per cent effort(180secs + 9secs) = 1,100 x 3 in 3mins.9secs with 4mins rest.

Billat's 6-minute maximum effort run, as stated, might be a second per lap faster than best 3k speed, or possibly only half-a-second per lap faster. Dudley, in 1984, proved conclusively that 10-minutes a day of 3k pace running for nine weeks tripled mitochondrial numbers and increased the aerobic enzyme cytochrome c by 100 per cent, more than achieved by 2 hours running daily at 60 per cent  $\dot{V}O_{2\max}$ (About 73 per cent of maximal heart-rate). However, who wants to run 2-miles flat out daily, six days a week for nine weeks! His experimental rats on the treadmill didn't have much say in the matter! What we can say is that training at 3k speed for 20-minutes a time via repetition running should find a place in every endurance runner's schedule whether he/she be an 800 metre runner or a marathoner. Here are some sample sessions at 8mins/3k pace and 9mins/3k speed:-

(a) 8mins/3k speed sessions -/1 x 2k, 4mins rest, 1 x 1600, 3mins rest, 1 x 1200 2mins rest, 1 x 800, 1min rest, 1 x 400. All at 64secs/400. (b) 16 x 400 with 30secs rest. (c) 8 x 800 with 90secs rest. 9mins/3k speed sessions - All at 72secs/400 - a) 4 x 1500 in 4mins.30secs with 3mins rest. b) 6 x 1k in 3mins with 2mins rest. c) 12 x 500 in 90secs with 60secs rest.

Astrand maintained that his 3-4-5 minute duration runs with percentages of effort were all equally effective. We have to ask whether running 1600 metres in 5-minutes, then 6-minutes(80% effort), then 5mins.30secs(90% effort) and finally 5mins.15secs(95% effort), is as efficient as running in 3-minutes 1,100m, and the same distance in 3mins.36secs(80%), 3mins.18secs(90%) and 3mins.09secs(95%).

If we take the 5-minute run at 80% effort, this equates to half-marathon speed. Ninety per cent effort correlates to 5k speed, and 95 per cent effort is definitely 3k speed.

A suggested plan for using Astrand's system starting in the winter is as follows:

Oct/Nov - Do a 5-minute maximum run.

1st week - Distance run x 6 at 80% effort, 30secs rest(R)

2nd week - Distance run x 5 at 90% effort, 60secs R.

3rd week - Distance run(DR) x 4 at 95% effort, 90secs R.

4th week - Do a 4-minute maximum run. DR x 5 at 80%, 60secs R.

5th week - DR x 4 at 90%, 2mins. R.

6th week - DR x 3 at 95%, 3mins. R.

7th week - Do a 3-minute maximum run. DR x 5, at 80%, 2mins. R.

8th week - DR x 4 at 90%, 3mins R.

9th week - DR x 3 at 95%, 4mins R.

10th week - Do a 5-minute max. run and repeat process.

A few words about Astrand who is accepted as the father of modern work physiology. In 1970 in collaboration with Rodahl he published TEXTBOOK OF WORK PHYSIOLOGY. He became famous for his various methods of predicting the  $\dot{V}O_{2\max}$  with great accuracy and introduced the Astrand Rhyming Nomogram. Not a book written on exercise physiology fails to make references to his research findings. THE END



Wythenshawe, 31.5.03. KERRY GILLIBRAND (415) leads from CHARLOTTE MOORE. photo by Mark Shearman.



Wythenshawe, 31.5.03. ANGUS MACLEAN leads the 1500m. 'A' race. photo by Mark Shearman.



# Pontificators . . .

Having been invited to speak on middle-distance subjects in three continents involving twelve different countries over the past 30 years, I have come to the conclusion that Great Britain possesses the greatest number of "experts" in distance running and the least number of world-class athletes to accompany them.

It's a free-world and we all cherish our right to speak out on anything we wish. However, when we speak with God-like authority on distance-running matters, we had better make sure that we have the credentials to back up what we say or write, otherwise we tend to look ridiculous. For instance, a few years ago one of my athletes finished second in the World Cross-Country Championships, no mean feat, since he defeated all the Kenyan team but one, that one was to become the greatest cross-country runner of all-time. Shortly after this race, my athlete turned up at his club to run a "leg" of a road relay where he was confronted by a newly qualified Senior AAA Coach, who, after congratulating him asked him what he was going to do in the track season. My athlete replied that he was going to concentrate on the 5k event. The coach then asked him what sort of training he was going to do. The athlete explained the plan, to which the coach exclaimed, "No! That's all wrong! You should be doing..." There followed an harangue of some 15 minutes' duration. Getting a little irritated by the coach's effrontery, he asked the coach, "Tell me, have you ever coached an athlete to make the Great Britain team?" He had not.

Now, pontificators come in various guises and many of them command respect and include:-

a) World-class athletes, past and present. b) World-class coaches, past and present. c) Famous physiologists, past and present. We have to be circumspect even with this successful group, for instance, one 10k record-holder announced, "Strength training for runners is a load of rubbish. My legs get all the strength they need from running 140 miles per week." However, when he was tested on a leg-press machine at a Southern Olympic training week-end, his girl friend, an 800 metres athlete, had stronger legs! We can conclude from this that a 10k runner may not require as much leg-strength as a two-lapper and the assertion that 140mpw makes for strong legs is not necessarily correct. We also have to look at the small print of schedules advocated by noted coaches. Often a great athlete makes a great coach in the eyes of the gullible. Harry Wilson(Ovett's coach), had a formula for greatness: 1) Getting one athlete to world-class may be a fluke. 2) Getting two athletes to world-standards may be a coincidence. 3) Getting three or more is a sign that the coach possesses something special.

Physiologists appear to be greatly distrusted for their opinions by many coaches and athletes. First of all, many of their research findings are based on work with rats. The Soviet researchers of old had little difficulty in finding human subjects to experiment with. Of late, American scientists have had little trouble in finding human volunteers among the running fraternity. It's amusing to hear the reaction to some physiologists' research. If the findings do not agree with our beliefs they are described as, "flawed", "Rats were used, we aren't rats", and a plain, often illogical denial, "I don't believe it." But, the fact is that no modern research can be published unless it passes four committees, the first being an ethical one. Two great bits of research have been published in the last 20 years. The first by Holloszy in 1984, lasting 13 weeks revealed that if we build up to running for two hours daily at a mediocre 60 per cent of the VO2 max. about 72 per cent of maximum heart rate(mhr) we will increase our mitochondria (Aerobic furnace cells) by 100 per cent and our cytochrome c (Aerobic enzyme) by 50 per cent. Lydiard was right! Dudley, a few years later, agreed with these findings, but decided to find out what would happen if his rats were made to run for less time and much faster. His work lasted nine weeks and he found that running for 10 minutes daily at 3k speed(100% VO2 max) tripled mitochondrial numbers and increased cytochrome c by 100 per cent. 3k speed is about 4-seconds per 400m slower than per 400m in one's best 1500m time, or 8-seconds faster per 400m than in your best 10k time per 400m. Now, no marathoner is going to say "All I need to do is to run 3k flat out daily and I will be fitter than anyone running 2 hours slowly daily." But, a combination of long, slow runs and 3k reps totalling 6k may be a little more logical. For example - 4 x 1500m at 3k pace with 400m jog recovery.

I should add that Britain's only male World Cross Country silver medallist in the last 20 years

did a 3k pace session once a week, as did Sebastian Coe.

Here are some interesting quotes heard or by the writer in the last year:-

PAULA RADCLIFFE - "British male distance runners don't like short-recovery work." "What a terrific quote this is! While we may start to train for the 10k with 25 x 400 in the target time with a lap jog recovery to accustom us to the distance and speed, we will eventually have to reduce the recovery jog in stages until we have just 50 metres jog recovery. The ultimate will be 6 x 1600 with 100m jog in 45secs. AN ENGLAND CROSS-COUNTRY INTERNATIONAL (Before the event became a GB team) - "It's impossible to be successful at cross-country unless one does 100 miles a week." First of all we have to look at the record of this athlete. He made the England team all right, but never finished in the first 100 of the WCCC. This should have given him a clue that his volume may have been a good idea, but how much of it was relevant to WCCC conditions! In order to count in that event one has to reach 5k in 14-minutes and run on at the same speed. Running 100mpw all at 6mins. per mile is not going to achieve this. At least one-third of the total volume will have to be at ½ marathon, 10k, 5k and 3k speeds.

A LONDON BASED SENIOR AAA COACH (Aged 60) - "An 800 metre runner need only do two gym sessions a week to get fit in the winter." Again, this individual has never coached a two-lapper to run for GB. Well, two gym sessions a week are better than nothing and if they are properly conducted circuit-training sessions because of their aerobic content they will certainly prevent a decline in basic fitness. But, isn't the idea in the winter to increase the efficiency of all parameters! There is no mention of RUNNING here! No mention of fitness-testing every 12 weeks. A bit difficult to maintain motivation without competition of any sort for half a year.

AN ASSISTANT AT A LEVEL THREE MD COACHING COURSE - "Cross-country running for 800 metre runners is a complete waste of time." Is it? While Sebastian Coe gave up the practice at age 20, Steve Ovett didn't. Nor did 1972 Olympic 800m gold medallist, Dave Wottle(USA), who won in 1:45.9 and equalled the world record of 1:44.3. He raced cross-country seven times every season and became NCAA All-American champion at it. Now, we cannot say his success was due to his cross-country running, but we can say that it didn't do him or Ovett any harm. It's too glib to dismiss it as "...a waste of time." If they like the sport, what's wrong with doing it?

U.K. HIGH-RANKING COACHING OFFICIAL - "I don't agree with Coe's 5-pace system of training. Who uses it?" Some statement from a man who doesn't actually coach anymore, and never expounds his views in writing and has a mediocre coaching record. In fact, quite a few of Britain's coaching hierarchy have expressed similar views. Well, one could say that one man breaking 12-world records in 4 years using the system was a fluke. But, according to the late Kim McDonald, his protegee Noah Ngeny, 2000 Olympic 1500m gold medallist, followed it to the letter as does Norway's number one 5k runner advised by Peter Coe. Not to mention Tim Hutchings, who was fourth in the 1984 Olympic 5k, running a personal best by 11 seconds. So, what is it that actually irks the critics? For a start, if you want to be efficient at 800 metres, you have to train over-distance(1500m pace), under-distance(400m pace), and the specialist pace(800m pace). That's three different speeds accounted for. Also, if you want to do well at 1500 metres, you need to train over-distance(3k speed). Four different speeds so far. The 5k pace session is given to back up the 3k one with more endurance. In fact, some 5k runners in the past and now, have better 1500 metre times than specialist milers. Ian Stewart was one such, running 3:53.2/mile and 13:22.8/5k, also, Dave Moorcroft - 3:49.3/mile and 13:00.4/5k. Where the critics may have a point is that not everyone can stand a track session every other day of the week AT FIRST. The remedy is simple, follow the track days with two days' of steady running until comfortable, and then switch to every other day. Another point which escapes the critics is that both 3k and 5k paces are universally accepted as THE major boosts to improving the VO2max, being 100 and 95 per cent of the VO2 max (A measure of fitness). I don't think we can say that great physiologists like Astrand, Saltin, and Costill, talk nonsense when they all agree that work between ½ marathon pace through to 1500m pace, bring the greatest rewards for the time expended. THE END

Frank J. Horwill, 4 Capstan House, Glengarnock Avenue, London E4 3DF O207 515 3472





## Two Great Men with the same Quest

Two work physiologists, Holoszy and Dudley, had the same idea – what increases the fitness of runners? They measured fitness by the increase of mitochondria and an aerobic enzyme – cytochrome c. The first is a sort of furnace that burns fat and carbohydrates, converting them in to ATP. These sausage shaped cells are so minute that a special microscope is required to spot them. The more of both a runner possesses the better.

Holoszy worked on the principle that duration was the key to fitness at a low pulse-rate of 60 per cent of maximum. Eventually, he found that running daily for 2 hours at this rate increased mitochondria by 100 per cent and cytochrome c by 50 per cent. The time required to reach this state was 12 weeks. RUNNING LONG AND SLOW DOES IMPROVE FITNESS MARKEDLY.

Dudley decided to experiment with different SPEEDS of running and also different durations of a speed. This involved marathon pace, half-marathon speed, 10k pace, 5k pace and 3k pace. After 12 weeks he noticed that mitochondria TREBLED and cytochrome c increased by 100 per cent when subjects were made to run for TEN MINUTES DAILY AT 3k SPEED! What he was asking us to believe was that if we ran 2 miles daily flat out this produced far better results than running for 2 hours slowly! The doubters could not explain away the massive increase in both mitochondria and cytochrome c. Dudley observed that when training time is limited running at 3k pace brought the best results for the time expended.

However, we have to remember race specifics – we need to run regularly for the same duration as our target marathon time and also rehearse the target marathon time. If we wish to run 4-minutes for 1500 metres, we must repeatedly rehearse that pace until it becomes automatic.

Establishing a 3k time is an important factor, because once we have a benchmark for the average time per 400 metres, we can start training at a slightly faster pace. We may run 3k in 10-minutes, this is 80secs/400, we can now try 79secs/400(9:52.5). When training at 3k pace we should jog one-quarter distance of the repetition as recovery. Thus, 16 x 400, jog 100, 8 x 800, jog 200, 4 x 1600, jog 400. The time allocation for jogging is not more than 45secs per 100m.

If we have not run 3k, we can estimate the pace required in training by adding 4-seconds to the average time per 400 metres done in a 1500 metres. Or, we can take the average 400 metres time done in a 10k and deduct 8-seconds. Given a 10k time of 37:30(90secs/400), the estimated 3k speed will be 90secs minus 8secs = 82secs/400 for a 3k pace session. Given a 5k time of 16mins, 40secs/5k(80secs/400), we deduct 4-seconds to establish the 3k speed, which will be 76secs/400(9mins, 30secs).

Other training distances to try are: 3 x 2k, jog 500m; 6 x 1k, jog 250m; 5 x 1200, jog 300m; 32 x 200, jog 50m. Complex training makes a chance: 1 x 2k, 2 x 1k, 4 x 500, or 1 x 1600, 1 x 1200, 1 x 800, 1 x 400 or 1 x 1200, 1 x 1100, 1 x 1000, 1 x 900, 1 x 800.

Another factor linked to 3k pace is that because it's 60 per cent aerobic and 40 per cent anaerobic, the latter stimulates fast-twitch muscle fibres. A good 3k time of 8mins, 30secs(69/400), inevitably leads to a sub 4mins/1500 and or 15mins minus 5k time. EMBRACE 3k WORK! THE END

Compiled by Frank J. Horwill, June 2003.

## BOOK REVIEW

Bannister and beyond. The mystique of the Four-Minute Mile.  
By Jim Denison.

This book consists of interviews with 21 men who have achieved sub four minute miles. It ranges from those who have done it more than 100 times to those who have achieved it only once.

It is an insight to the varying philosophies of some of the greatest athletes of all time down to those for whom this one achievement was probably the high point of their athletic careers. To say that the book makes fascinating reading would be an understatement. It enables the reader to understand just what breaking four minutes meant to these athletes. Even to-day, with the event held much less often than before, or perhaps because of that, such a performance bestows a certain aura on the athlete who achieves it.

The book comes complete with many statistics and is highly recommended. It can be obtained via [www.breakawaybooks.com](http://www.breakawaybooks.com)

Jim Denison, *Bannister and Beyond: The Mystique of the Four Minute Mile*, Breakaway Books, Halcottsville, NY, 2003. 256 pp. \$22.

Roger Bannister, the first man to have been certified to have run a mile in less than four minutes, has not been the object of as much sports writing as might be expected. Though regarded by some as a hero he never reached the status of celebrity. His own record, *The Four Minute Mile* (originally published in Britain as *First Four Minutes*), is as good a place as any to find an adequate description of his most well-known track achievement, though the ephemeral publication, *Athletics World*, carried what is arguably the best ever-description of the 'race', penned by the ubiquitous Norris McWhirter. The Four-minute mile came and went. Set in May 1954, Bannister's record was short lived – 46 days to be exact – and succumbed to the efforts of the Australian, John Landy. One of the problems of speeding up is that there is also an inevitable slowing down. What appeared fast in 1954 is now considered slow. To put it bluntly, the four-minute mile is passé at a time when the world record stands at 3 minutes 43.13 seconds and the best ever recorded time over two miles is less than eight minutes. Modern athletes run the mile in about the same time as Bannister ran 1,500 metres. The inevitable 'progress of the 'record' is memorialised in A. E. Housman's lines in 'To an athlete dying young': 'Smart lad, to slip betimes away/From field where glory does not stay'.

Jim Denison's book, *Bannister and Beyond*, tries to rescue some of romanticism and mystique of the Four-Minute Mile. His basic thesis (it that is not too strong a word) is that it is still a memorable event, one that is significant to athletes and fans. It remains a significant target, an achievement of worth, to the modern athlete. He elaborates on this claim by interviewing 21 four-minute milers, each of whom recalls his first four-minute effort. Denison interviewed each of these runners, ranging from former world record holders (including John Landy, Steve Scott, Jim Ryun and Sebastian Coe) to three runners whose names were totally new to me. Sixteen of the contributors come from nations where imperial distances were traditionally used. The contents of the interviews range from the elegant and insightful perspectives to the curt and unelaborated comments. The book has a brief introduction, a briefer epilogue and a short statistical appendix. The book carries no references or footnotes but does include a photograph of each of the contributors.

Though not intended as an 'academic' work (Denison is well-known for his work in qualitative approaches to representing sport), I found *Bannister and Beyond* much more than a good read. Several of the chapters provide sensitive insights about motivation, dedication, sensory experiences and social-history. Denison works hard to get his respondents to contribute to his view that the four-minute mile still carries a degree of kudos. He gains support from most of his contributors though in some cases he seems to ask leading questions that result in his polite respondents more or less agreeing that running the mile in four minutes still 'means' something.

The comments of several of the contributors provide some significant insights into attitudes to running – and to Bannister himself. John Landy reveals his seeming dislike of Bannister when he observes that the four-minute mile was a psychological barrier and 'people wouldn't stop insisting that I ran that time (3minutes 57.9 seconds) because the barrier was gone. In other words, 'all thanks to Bannister'. Landy also criticises Bannister use of pacemakers in the four-minute mile – something that he found 'questionable'. For him, a paced record would be less respected than one run 'fair dinkum'. The man who broke Landy's record, Derek Ibbotson also makes clear his dislike of the 'Oxford set' of which Bannister was a part. As a 1950s runner, Ibbotson also notes that in those days 'nobody was an amateur, except maybe Bannister'. Maybe: Bannister's reputation as a gentleman amateur is still pedalled by sports historians and others but they ignore the undoubted seriousness of Bannister's daily training, his scientific attitude, and the undoubted cultural capital and psychic income that his running generated.

One four-minute miler missing from this book is Roger Bannister himself – though paradoxically his image adorns the front cover of the dust-jacket. We learn little that is new about Bannister. Perhaps he was unwilling to take part in Jim Denison's project. If so, it is surprising as he collaborated earlier in a lengthy interview about his early years, his running career and his subsequent work as a medical scientist (see <http://www.achievement.org/autodoc/page/ban0int-1?rand=6427>). But Bannister's absence from the book's pages (though not its cover!) does not turn out to be a problem as the book is not about his achievement but its subsequent impact on the minds of those running after him.

Denison concludes that while Bannister may be the four-minute mile's 'poster child', the four-minute mile's 'significance and importance clearly transcends his contribution'. I am not totally persuaded. As his final interviewee, Commonwealth 1,500 metres champion Mike East, states, 'today, the 1,500 metres just carries so much more currency than the mile'; and for today's runner 'the future's in the 1,500'.

In what is generally a polished work, there are a couple of minor glitches. In his introduction, Denison states that Bannister's best time before his 3 minutes 59.4 seconds breakthrough was 4 minutes 2 seconds – the British record. The time is correct but the record isn't. This result was never ratified because of the dubious pace-making tactics that Bannister (regularly) employed. And on several occasions, Emil Zátopek is spelled Zatopeck. Additionally, while it is possible, as Denison suggests, that the term 'four-minute mile' was first used in 1933, the notion that a mile might be run under four minutes was predicted by the American scientist Arthur E. Kennelly as early as 1904.

*Bannister and Beyond* is, for me, more than a memorialising of the four-minute mile. It is a book which enables the reader to absorb the feelings and attitudes of both yesterday's and today's world class athletes. Ibbotson's contribution can be compared with that of East. Likewise, four-minute milers who have not reached world class but languish relatively low in the ranking lists are able to talk about their experiences and expectations. The book, therefore, is of interest to sports historians, track enthusiasts and the general reader, for whom it is pitched. At \$22 in hardback it is a very good buy.

John Bale



# WORLD CHAMPIONSHIPS PARIS 2003

## MENS 800 28/8

Heat 1. 20.35 Temp.25c Humidity 54%

Ricky Soos, our only representative, was pitched into the highest level of competition. Qualifying was first two plus eight fastest losers from eight heats. Given those terms a fastish race was desirable knowing that those in the other heats would have some advantage in knowing what was needed. He was the youngest, by a couple of years, of the seven runners. He was, perhaps inevitably given the tough qualifying standards, the fifth fastest this season of the seven. The opening 200 was covered in 28.44 with the bell reached in 54.21(second 200 in 25.77). Ricky was in seventh place at this point. The pace up-front did not slow and he found it difficult to make progress until the home straight when he came strongly through to take third spot in 1:47.80 against the winner's 1:47.21. Given his seasons best of 1:46.06 going into the race this was a commendable effort and he did achieve negative splits of the order of 54.31 and 53.49. Unhappily this was not fast enough to carry him into the next round. The "slowest" fastest loser from the eight heats clocked 1:46.68.

## WOMENS 800 23/8

Heat 1. 17.25 Temp.26 Humidity 44%

Charlotte Moore found herself faced with seven athletes, five of whom had posted faster 2003 times better than hers. In addition she was the youngest by three years. The first 200 was run, by the leader, in 28.03 seconds, the bell was reached in 58.93 (30.90) with 600 at 90.18(31.25). Unhappily Charlotte was tripped at around this point and almost fell and any chance she had evaporated. Her finishing time of 2:03.80, in seventh place was, in the circumstances, a good effort but did not enable her to go forward to the next round with qualifying being first three with nine fastest losers from five heats. The girl who finished in front of her notched 2:02.01 and she did get through. But for her near fall Charlotte may well have made that.

Heat 2. 17.31 Temp.25 Humidity 50%

Jo Fenn faced a situation, with Mutola in her heat, of running for second or third. Five of the other eight women in the race had faster 2003 clockings. With typical fervour Jo followed the early leader, Langerhölz, through a 28.68 opening 200, a bell time of 60.36(31.68) on to a 600 time of 91.00(30.64). Jo was second at 500 but was passed to finish in a qualifying fourth at 2:01.27-a seasons best! Given how late, injury induced, start to the season this was most encouraging

Heat 3. 17.37 Temp.25 Humidity 50%

Kelly Holmes was equal third fastest, on 2003 times, in her heat. Starting cautiously she was sixth at 200, leaders time 28.20. Moved up to third at 400, leader at 61.82(3.62), taking advantage of the slowing pace. Third still at 600, 94.72(31.10) she coasted home in a qualifying second place in 2:03.75. This was the slowest heat and she looked to be in control at all times.

Semi-Finals. 24/8

Three races, first two plus two fastest losers to the final.

Semi-Final 1. 17.40 Temp.26 Humidity 39%

A quickish opening lap of 57.9(26.90 at 200) served to distinguish the "ladies from the girls". Lewis had led at 200 with Graf heading the race at 600,89.9(32.0). Graf went on to win with Jo producing another seasons best in third with 2:00.56. She left in her wake four women who had run faster than her this season. With the knowledge of what was needed for the faster losers spots the later runners shunted her out of the final, failing to make it by 0.15 of a second. Life is full of "ifs" but an injury free season must surely have seen her into the last eight... and then what?

Semi-Final 2. 17.48 Temp.26 Humidity 39%

Kelly Holmes drew the favourite, Mutola, in her race. This suggested only second place was available for clear entry to the final. The first 200 was 27.98 and the 400 was 58.08, (30.10), the 600 time was 88.98 (30.90). The pace remained "steady" with Mutola, having led most of the way coming home in a winning 1:58.45(29.47) with Kelly a close up second in 1:58.86-a seasons best.

Final 26/8 20.50 Temp.24 Humidity 36%

Graf did not start having badly cut her foot when dropping a glass bottle. To the onlooker Mutola took command from the start. The first 200 took 28.16, 400 in 61.20(33.04) with 600 in 92.32(31.12). Kelly was sixth at 200, third at 400-replicating her tactics in her heat when she moved up during a slow second 200. She was closing on Mutola at the 600 point and briefly took the lead in the home straight only for the favourite to pass her before the line. Kelly held her to a mere 29/100 of a second for silver in 2:00.18. Her last 200 was less than 28 seconds, most impressive. Given her qualms about her fitness prior to the meeting Kelly redeemed herself magnificently. Mention has been made in the press (small p) about the "low standard" in the 800. One can only beat those that turn up. Graf did not make it and a clearly less than fit Ceplak opted for the 1500. Out of the 40 starters 18 had run inside two minutes this year and FOURTEEN of those had clocked faster than Kelly. Her silver medal was no mean achievement.

## MENS 1500 23/8

Mens 1500. 23/8 Heat 3 18.16 Temp.25 Humidity 50%

With only one representative, Michael East hopes for a medal were slim. There were only a total of 28 starters, due, no doubt to the tough standard set by the IAAF, for this event. The three heats required qualifiers for the semis to be in the first six with the six fastest "losers". Michael drew the last heat with the slowest qualifier from the other two races at 3:50.89.

He ran fifth at 300, was third at 400(59.87) maintained third at 800(2:01.30), ran close up to the leader at the bell. The three lap time was 3:01.00 and Michael seemed easy as he took fourth place in 3:41.61. He ran a sensible, controlled race, always in contention and came home in some comfort.

Semi-Final 2. 25/8 21.00 Temp.24 Humidity 41%

Two races, first five plus two fastest loser to the final. There were eleven starters in the first race, twelve in the second. The first race was won in 3:38.25 with sixth place recording 3:38.61. Clearly making the final would not be easy. There were six men in the second race with faster 2003 times than East, some of them over four seconds faster! Overall the racers took little heed of the speed of the opening semi. An opening lap of 59.69 led to an 800 time of 2:03.87 and a 1200 time of 3:00.87, all slower than the first race. The last 300 took 39.28-52.36 pace. In the rush for the line Michael found his sixth place time of 3:40.87 not enough, he must have run a tad under 39 for his last 300! One of the men that "qualified" ahead of him was the Frenchman Chouki who was later found to have taken a banned substance. Nevertheless there was another faster "loser" in the first race so that did not preclude East from being unfairly denied of a final place.

## WOMENS 1500 27/8

Heat 1. 21.78 21.15 Temp.23 Humidity 50%

Qualifiers would be in the first six plus six fastest "losers" from three heats, there 30 starters. Jo Pavey was the third fastest for the season in this heat. 400 in 65.86, 800 in 2:15.41(69.55) and at 1200 the clock showed 3:20.03(64.62). Jo was always well placed and finished a comfortable second in 4:08.60. Encouragingly the last 300 was 48.15-64 pace.

Heat 2. 21.23. Temp.22 Humidity 53%

A somewhat slower race. 66.99 then 2:17.69(70.70) and 3:25.37 at 1200(67.68). Hayley Tullett was equally comfortable running second in 4:10.53, last 300 in 44.79, just under 60 second pace.

Semi-Final 1. 29/8 21.35 Temp.17 Humidity 82%.

First five to the final with two fastest "losers". Note a cooler evening with higher humidity. Both our girls were drawn in this semi. With the favourite, and noted front-runner in the field, Ayhan in the field the first 400 took 63.82, slowed to a 2:10.92 800(67.10) and 3:17.22 1200 (66.30) with the last 300 in 46.18 (62ish pace). It was heartening to witness both girls making the final, seemingly with ease, Jo second in 4:03.78 and Hayley fourth in 4:03.85. The second heat had near identical 1200 time but finished two seconds slower.

Final 31/8 18.20

As expected Ayhan took an early lead reaching 400 in 60.50 with both British girls, sensibly, laying back from that pace, running cautiously. 800 was reached in 2:06.76(66.26) with our two slowly, and astutely, improving their positions. The bell was reached in 2:56.58. (I have, ingrained in my memory, the image of Jo fighting for the lead at a pace that must have felt like jet-propulsion to her at this point) The 1200 time was 3:12.61(65.85). Jo was feeling the pace at this point and would lose position in the last 200 but Hayley, running with more caution was making progress. The three Russian runners entered into a near fight with 200 to go before Tomashkova emerged to challenge, and pass, the long time leader Ayhan for a 3:58.52 win with Hayley producing a life-time best of 3:59.95 for third. Jo paid for her brave and audacious running by fading (sic) to tenth with 4:03.03. Last 300 clocked at 45.91 for the leader with Hayley said to have covered her last 200 in 30.9.

## OVERALL VIEW OF THE MIDDLE DISTANCE

Ricky Soos ran as well as could have expected in his first senior major Championships. Given reasonable progress perhaps he will be the sub 1:45 man we have long waited for. Michael East appears to be on the brink of real success. Recent championship races have seen him on the brink of doing something really big on the world stage. Can he move on? His best 800 time is better than 3:31 man John Mayock and less than a second slower than 3:32 man Tony Whiteman. His over distance times have yet to match theirs but time is on his side.

Jo Fenn strung together two first class performances. Roll on 2004!!! Charlotte Moore had real bad luck when being tripped from behind but she will surely be there next year. Kelly Holmes beat all except one what more can be said!! Given her own doubts this was exceptional stuff.

Hayley Tullett's reward for a long career was hard earned. A superb improvement on last year's Munich effort. A marginal improvement must surely see her vying for Athens gold. Jo Pavey, enormous strides forward. 4:11 last year, down from a 4:07 PB of 1997. Fighting to take the lead at a 3:56 bell! (A PB of 4:01 after the Championships) Will it be 1500 or 5k next year?

BMC members will have observed that two of the three individual medals gained in Paris were in the middle-distances. From 46(?) team members two-thirds of the individual medals were produced by less than 15% of the team. Vive le/a BMC!

Previous World Champs.Finalists

Womens 800

1991 Ann Williams 7<sup>th</sup> 1993 Diane Modahl 4<sup>th</sup>.

1995 Kelly Holmes 3<sup>rd</sup> 2001 Kelly Holmes 6<sup>th</sup>

Womens 1500

1983 Wendy Sly 5<sup>th</sup> Chris Boxer 9<sup>th</sup> 1987 Kirsty Wade 6<sup>th</sup>

1991 Kirsty Wade 6<sup>th</sup> 1995 Kelly Holmes 2<sup>nd</sup>

Mens 800

1983 Peter Elliott 4<sup>th</sup> 1987 Peter Elliott 2<sup>nd</sup> Tom McKean 8<sup>th</sup>

1993 Curtis Robb 4<sup>th</sup> Tom McKean 8<sup>th</sup>

Mens 1500

1983 Steve Cram 1<sup>st</sup> Steve Ovett 4<sup>th</sup> 1987 Steve Cram 8<sup>th</sup>

1991 Matthew Yates 10<sup>th</sup> 1993 Matthew Yates 6<sup>th</sup>

1995 Gary Lough 9<sup>th</sup> 1997 John Mayock 9<sup>th</sup>.





The thoughts and views in the following notes may be considered obvious, pointless or just possibly of interest. It is hoped that they at least provide some food for thought. Opinions for or against would be welcome. There must be a number of readers who would like to add, or subtract, from what appears here.

## IF A JOB IS WORTH DOING IT IS WORTH DOING WELL

The above old adage can apply to middle-distance training and preparation. Running, presumably, is accepted by all as the BEST training for racing. For many years most have accepted that additional forms of preparation have a part to play e.g. weight training, circuit training etc.

Listed here are some thoughts on this matter. When injuries occur they may prevent an athlete from running. What to do? Inactivity must result in loss of fitness. However if a simple form of weight training, even as little as once per week, is followed it enables the athlete to step up the incidence of this activity without the sore muscles associated with starting from scratch. They can at least retain some level of fitness.

Much the same applied to circuit training, a "home-based" circuit can easily be established which can be "expanded" if injury occurs. Additionally when weather prevents running such activity enables something to be done. It will obviously not replace the benefits to be obtained from running but will provide an outlet. The mental frustration of doing nothing is replaced with the thought that something is being achieved. The activity can, in some measure, give rise to a measure of "runner's high" and so dissipate the anxiety of not being able to run.

Many indoor activities may be considered boring by runners. They probably are but the need to keep fitness levels up must be important. Weights have been mentioned, circuits as well. One simple exercise is to use a domestic chair. Step up for 30 seconds with 10 seconds rest, leading with alternate legs. Hold a weight, bag of sugar even, in each hand to make it harder. Wear a "pulseometer", you may be surprised how quickly you can reach 140/150 beats per minute. Of course its bl... boring but you are keeping fit even if you are not getting fitter and fifteen/twenty minutes soon passes.

Influenza can be very debilitating. A severe bout can sideline a runner for three or four weeks, longer if an effort to resume training is taken over early. For a few pounds you can purchase a flu jab, previously restricted to pensioners and those at risk. Yes it may not protect you but can you, for this modest expenditure, afford to risk losing 15%, or more, of your winter programme, as well as feeling ruddy awful for a month?

Diet, much has been published about diet in this magazine. Apart from sensible eating having obvious benefits the claims for special athlete directed diets are becoming recognised. Up to 10% improvement sound far-fetched but even if its only 2% or 3% that can turn the county runner into a near International eg 1/50 to 1/47.

Mike Rawson, 1958 800 European Champion, found at one time, although training hard, his performances were worsening. A routine visit to the dentist revealed a not painful abscess was leaking poison into his system. Routine, and regular visits should be on the agenda.

Physiotherapy and Podiatry. Just as a car needs routine "preventative maintenance" so visits to such clinics be considered. Cost will be a factor but if the jobs worth doing....



Paris, 26.8.03. KELLY HOLMES. photo by Mark Shearman.



Wythenshawe, 31.5.03. Start of the women's 1500m. 'A' race. photo by Mark Shearman.



# MY TRAINING OF A WORLD CLASS 800m RUNNER

## A PERSONAL PERSPECTIVE

### Relating to the preparation and programming of Mbulaeni Mulaudzi from 2000 to 2003

#### Introduction

In January 2000 a somewhat awkward young man walked into my office and asked to join our training group. I could neither spell nor pronounce his christian or surname. He explained that he had come to register as a Sports Marketing student at my institution and that he ran the 800m in 1:48.00

Somewhat disbelievingly I asked him what his 400m time was and he immediately responded by saying 47.20 – I was starting to take notice. I phoned Gert Le Roux, our internationally renowned statistician in Pretoria, spelt the names to him but before I could finish he said ‘Oh you’ve got a good one there, that’s Mbulaeni Mulaudzi’

Indeed I had – I had inherited the 1999 All Africa Junior 800m Champion a partnership that lasted from January 2000 to literally the eve of the IAAF World Championships in Paris a period of 3 and a half years

#### Personal details

Date of birth	8 September 1980 (23 years of age)
Place of birth:	Muduluni Village in Venda (part of the Northern Province of South Africa not far from the town of Louis Trichardt)
Height :	1.76m
Weight :	65kgs
Previous Coach :	Makonde Makhumisane
Club :	Mr Price/VaalTech (Mr Price is a major retail clothing company in South Africa that sponsors clubs and more especially individual athletes. VaalTech is my Institution – the Vaal Triangle Technikon – and our athletics club)

#### Annual Progression/Personal Best Performances

	400m	800m	1000m	1500m
1999	47.20	1:48.00		
2000	47.34	1:45.55	2:23.08	
2001		1:44.01	2:19.77	3:44.05
2002	46.20r	1:43.81		3:39.70
2003	47.6	1:42.89	2:18.45	

#### Major Titles and Competitive Record

- In 2000 he ran a 4km cross country trial in 12:06 and a 10km road race in 31:42
- In 2001 he was 6<sup>th</sup> in the IAAF World Championship 800m (final) in Edmonton, Canada
- In 2002 he was the Commonwealth Games 800m Champion
- At the same Commonwealth Games he ran the 3<sup>rd</sup> leg of the 4 x 400m relay in 46.20 with the South African team coming 4<sup>th</sup> in the final
- In 2003 he was the 800m bronze medallist in the IAAF World Championships in Paris, France
- In 2001, 2002 and 2003 he was the South African 800m Champion
- Currently ranked No 2 in the world for 2003 and No 17 on the world all time 800m list

#### The Shaping of a Coaching Philosophy

My very early thoughts were influenced by the inspirational writings of Percy Cerutti and Arthur Lydiard whose ideas are still very relevant today

However I am very much a product of the British coaching system having spent 4 and a half years in England from 1968 to 1973, 3 years of which were as a Physical Training Instructor with the Royal Air Force. I did my AAA and BAAB coaching awards through John Le Masurier, Harry Wilson and Bill Marlow

I trained and competed mostly with Thames Valley Harriers at West London stadium under the guidance of Ron Roddan

I am afraid my competitive record was humble to say the least. Irrespective I ran nearly every day for 14 years and that helped shape my thoughts. The actual doing and self experimentation was invaluable

On my return to then Rhodesia I continued to read as much as I could and ideas were shaped by the training theory expounded by Tudor Bompa and Frank Dick and the creative practical thoughts and writings of Harry Wilson and Frank Horwill

Exercise physiology was made relatively easy for me by reading David Costill, David Martin and Jack Wilmore

There is no question that the greatest influences, from a practical point of view, were Harry and Frank and that wonderful magazine ‘The British Milers Club Newsletter’. Link that to Jess Jarver and ‘Modern Athlete and Coach’ and you have the crux of my syllabus. The old East German literature was always too stiff and stilted for me to digest

Frank Dick and Jess Jarver, in my view, should be credited with making a lot of the East German material palatable

Any form of distance running relates to the expansion and efficiency of the energy systems all underpinned by speed and strength. Then find an athlete with the right genetic makeup, well motivated in terms of work, a natural sense of tactical competitiveness and you are in business

Mbulaeni came to me with a limited exposure to physical education, as we know it. He had some background in football but soon found a natural aptitude for running. However it appears he was a very much a distance and hill trained athlete with some speed sessions thrown in. It was apparent that he lacked a certain degree of strength but that the area for greatest improvement was speed endurance, strength endurance and a marrying of the two as they relate to the 800m

A well-developed VO2Max may be well and good and whilst we cannot dispense with it, a highly effective anaerobic threshold holds a greater key to successful 800m running. He had this in abundance. He is an extremely efficient runner

He adapts to sessions very quickly. Professor Tim Noakes of South Africa would call him the classic ‘supercompensator’. Give him an ‘inch of work and he improves by a yard’ as opposed to the other way around

Mbulaeni on the third leg of the 4 x 400m relay for South Africa at the recent Commonwealth Games ran 46.20 accordingly to your statistician Bob Sparks. Coe in comparison ran 46.87 in the 1979 AAA Championships at Crystal Palace and in the same year a 45.5 in a 4 x 400m relay at the Europa Cup. Mbulaeni is there or thereabouts given his limited exposure to the event

#### Programming

##### (Training 1 – The Aerobic Component)

The aerobic component remains as relevant today as it always has. Lydiard, more especially, and Cerutti taught us that over forty years ago. It lays the foundation for the harder anaerobic work to follow and as a solid base allows the athlete to

- run more economically at a given speed
- to be able to train more intensely
- recover faster after intervals of work, after whole sessions and even periods of sustained work ie several microcycles
- compete at a more constant or consistent level throughout the competitive season

Given our time constraints we schedule around 4 weeks of steady state running and recovery runs as an early preparatory phase

Before the end of this period we have already introduced circuit training. This training can be viewed under the heading of Strength

Slowly we introduce 3 morning sessions of a maximum of 35 minutes of easy running

Frank Shorter was once quoted as saying that 5000m training was the crux or pivot for all distance training. In other words it was endurance work for the events like 800/1500m and endurance work, but also speed work, for the events like 10 000m and the marathon

I subscribe to that theory given my particular interest in the 800m provided the athlete is of the 800/1500m type and not the 400/800m type

800m running is not just about developing a high VO2max. More importantly, as with all distance running, it is about creating a high anaerobic threshold

We work around sessions which I call aerobic intervals. They are

- 10 x 1min with 3 mins recovery
- 6 x 2mins with 2mins recovery
- 5 x 3mins with 2-3mins recovery
- 4 x 5mins with 2-3mins recovery





None of this work is done on the track and we alternatively use undulating cross country courses with the occasional session on the road

This progression also includes 'split' sessions

- 30mins of 10 easy, 10 hard and 10 easy; or
- 30mins of 10 easy, 10 hard, 5 easy; 5 hard;
- 30mins of 10 easy, 15 hard and 5 easy;
- 40mins of 10 easy, 10 hard, 10 easy, 10 hard
- 40mins of 10 easy, 20 hard, 10 easy

This work would lead us into a 'time trial' type sessions of 30-35mins hard

All these sessions are solid, of a building nature and finished in a way that will not induce any breakdown within the athlete ie always a little something left at the end of the session

We do a mixture of this work twice per week, 4 times within a 14-day microcycle together with strength work and plenty of 30-40min recovery runs

Our longer recovery runs are 50mins or 1hour or 1hr:10mins in duration

With my aerobic intervals ie the repeat 3mins, 5mins and with some of the 'split' sessions I allow for a 10min break and then we will introduce 4-6 x 100m strides at a fast but relaxed pace with a 100m walk back recovery

Towards the end of the preparatory phase we may introduce 16 x 200m (3200m) with 200m recovery or 10 x 300m (3000m) with 300m recovery or 8 x 400m (3200m) with 3mins recovery. They are done relaxed and with an element of speed, more like a cross between an aerobic interval and an anaerobic repetition

In fact we are never too far away from fast aerobic bordering on anaerobic work

They say that the 3000m is the first distance event to become truly aerobic. You will see that many of the 'split' sessions mimic that distance (or thereabouts) and the aerobic interval totals are around that distance as well

If life has it's up's and down's then putting together a training programme and implementing it has, at times, to be a nightmare. With all the proverbial hurdles to be crossed you sometimes have to coach 'off the seat of your pants' but a good solid plan and lot's of experience will get you through

Mbulaeni has never been injured from this type of training

Our philosophy is to work at a relatively hard level whilst becoming more and more specific in terms of our racing needs. Then add judicious amounts of complete rest and active recovery

The distance work and strength training will provide the cement

#### (Training 2 – The Anaerobic Component)

Within this pre-competition phase of training work has, of necessity, to become very specific

I subscribe to Frank Horwill's 5-tier or multi-tier system of training and the 4 and 5 second rule. I do not make a conscious effort to follow them rigidly but more as a guideline. Frank's 'trio-training' is common sense and in effect alludes to the 'law of specificity'

Mbulaeni and I knew instinctively what the needs were and how sessions could be adjusted

During this phase of training aerobic intervals were used sparingly as was circuit training and hill sessions

The emphasis now is on speed, speed endurance and strength endurance as they relate to the event. We use the following Anaerobic Repetitions:

- 350m, 300m, 250m, 200m, 150m with double the distance recovery
- 250m, 200m, 150m, 100m (same recoveries as above) plus 4-5 x 60m (with same distance walk back recovery)
- 6 x 400m with 5-6mins recovery moving down to
  - 4 x 400m to
  - 3 x 400m to
  - 2 x 400m (occasionally)
- 6 x 300m with 4-5mins recovery moving down to
  - 2 x (3 x 300m)(300m between reps) to
  - 3 x (2 x 300m)(300m between reps) to
  - 3 x 300m to
  - 2 x 300m (occasionally)
- 8 x 200m with 200m recovery – ½ walk ½ jog recovery moving quickly down to
  - 3 x (3 x 200m) with 200m walk/jog recovery between reps and 5mins between sets
  - 4 x 200m with 5mins recovery
- 15 x 100m very fast concentrating on relaxed effort with 100m walk back recovery

With the exception of the 400's and the volume end of some of these sessions they are all faster than race pace. All are speed, speed endurance based with the sets and reps introducing strength endurance at the latter part of the session

I have always had difficulty incorporating 600m into my 800m track sessions and therefore do not use them. My 3 x 400m (1200m = double 600m) and my 3 x (3 x 200m)(which = 3 x 600m) tell me exactly what sort of shape he's in and what I can expect in racing. I have never been proved wrong. This all assumes that your base work is right

These two sessions (a) 3 x 400m and 3 x (3 x 200), more than any other, tell me what state of fitness Mbulaeni is in. In my book they are absolutely magical

Other coaches will naturally have other ideas and variations. I know this is what suits Mbulaeni because he responds to it so well

I have a rather unusual way of measuring the specific endurance of an 800m runner. It is only valid, of course, if you apply the same principle each time

\* Sebastian Coe : 800PB = 1:41.72; 400PB = 46.87

Remove the 1 minute and subtract 41.72 from 46.87 which = 5.15

This figure equates to -5.15

\* Mbulaeni Mulaudzi : 800PB = 1:42.89; 400PB = 47.20

Subtract 47.20 from 42.89 which = 4.41 which equates to -4.41

However I am sure these figures could be adjusted if one looks at their exceptional 400m relay leg times and the fact that Mbulaeni has never consistently raced 400's. They have been rare and 'one off affairs'

Interestingly enough Kratochvilova and Mutola and all other female 800m runners for that matter equate to a + figure. On average Mutola is roughly +3

#### (Training 3 – The Strength Component)

In November 2002 I visited England and three of your very successful coaches to 'pick' their brains on strength training it applies to 800m running

They were Norman Poole, George Gandy and Carl Johnson

I believe that an 800m runner's strength to bodyweight ratio is crucial and following this visit still agree that strength endurance and elastic strength are the main areas of strength we need to improve. However I also believe that maximum strength, in our case probably the least understood, also plays a role

What are we strengthening?

- The stabilizers ie arms, shoulders and head (the camera) to help counter the movements of the prime movers (the legs) and to assist in running posture
- The second group of stabilizers in respect of Core Strength ie the stomach and back to again assist in posture particularly when reacting to a mid-race break or at the end of a race when fatigue has set in
- The Prime Movers in respect of the legs (the main propellants) or the lower limbs and their relationship to the hips

The popular forms of training for strength are

- Circuit and/or Stage Training with elements of weight training
- Hill Training
- Running Drills
- Plyometrics

I concentrate on circuits as opposed to stage training and unlike my British colleagues do not mix circuits with plyometrics nor do I do the same volumes of work. Rightly or wrongly I believe there is a ceiling or saturation point where any further gains in strength are of minimal value. But that's just my way of doing things

My ideas are from Scholich and George Gandy and I try to keep the exercises as specific as possible. Here they are

#### Circuit Training (CT1) - Session 1

- 1 Squats
- 2 Bench Press
- 3 Leg Extension
- 4 Sit-up's
- 5 Back Raise
- 6 Leg Raise

#### Circuit Training (CT2) – Session 2

- 1 Leg Press
- 2 Press-up's
- 3 Alternate Dumb-Bell Press
- 4 Step-up's
- 5 Lat Pull-down
- 6 Sit-up's
- 7 Back Raise

We do all these exercises on a strength endurance format ie 3 x 8 to 3 x 10 / 12 to 4 x 12 to 4 x 20 to 4 x 25. Weights are lighter and we look for the 'burning' sensation. Obviously we do not get these high reps on the press-up and the leg raise



With the squats, which we have also incorporated into the second session, we try and work on a maximum strength format ie 3-4 sets of 6-8 reps. Mbulaeni is now up to a ½ squat (ie thighs parallel to the ground) with 70kgs with relative ease. Done this way one achieves increased levels of strength with a minimum of hypertrophy

Following my visit to my three coaching colleagues I remain convinced that

- There is a role for maximum strength but only in the prime movers ie the legs
- That there is a saturation point or ceiling whereby any further gains in leg strength cannot be expressed

And that strength contributes to the following

- An increased stride length
- An effective overall movement structure
- An optimal combination between stride rate and stride frequency
- Helps maintain the required running speed for a particular distance
- Helps prevent injury
- Improves the strength mechanism of the central nervous system
- An improvement to the VO2max through an improvement in speed

Moving onto hill training Mbulaeni has done little this season because of congestion and injury. When fit and time is available our specific sessions are 10 x 200m (200m jog down recovery) moving onto 15 x 150m (150m jog down recovery)

Throughout the preceding periods of training he will have run over hilly routes or hilly circuits

With regard to Running Drills these are done as part of the warm-up and we restrict ourselves to High Knee's and Butt-Kick's, sometimes we will do a series of High Knee Jumps off both legs with the knee being brought up to the chest. They are normally done over 30m with a run-out at the end

Drills can be used either as a technical drill or as a strength endurance session

We don't do Plyometrics. Mbulaeni is quite bow-legged and I am concerned with impact stress given the other training he is doing. He is an extremely bouncy/springy athlete even when he is doing the easier recovery runs. I would suggest that running in itself is a plyometric activity and he has done enormous amounts of what I would call 'aerobic plyometrics'

If I saw a need I would do power hopping over 25-30m with both right and left legs, some bounding and no hurdle jumps

One also has to bear in mind how you fit all this into an already crowded programme. Therein lies the art of coach. Take what you need for a particular athlete and discard the rest (for the moment)

Mbulaeni is very much a running, and more running, some hills, no plyometrics, circuit, some weights and a few drills athlete

I have not attempted to involve myself in such activities as Swiss Ball, Philates, Thermaband and such like. Perhaps they have a role for injured athletes or where a particular weakness has been identified

#### **(Training 4 – The Periodisation Component)**

In a normal Northern Hemisphere environment I would be dividing my year in half. The first half would be made up of 2-2-2 months and the second half of 2-2-2 months to include varying proportions of preparation, pre-competition, competition and rest or recovery

In the Southern Hemisphere it's a bit harsher with February/March containing certain compulsory races which may extend into April. The SA Senior Championships are towards the end of April then there is a 6-week break before the IAAF Grand Prix/Golden Leagues. The end of August is a major Championship followed by a return to the IAAF Circuit. Another 4-week break and then the African Championships in the middle of October

Leading into the 2003 season Mbulaeni was exhausted, on the edge of injury, listless, studying, trying to get himself settled again and then accidentally tripping and spraining his ankle getting out of his car

It was not surprising then that he only really starting training in December

You will find attached a copy of his Competitive year

December/January and February would have been solid base work

March/April would have been pre-competition with races

The following 6 weeks would have been a little base training and back to pre competition

He started his European account on 9 June Rehlingen, Germany

He stopped after the Special Grand Prix in Madrid on 19 July where he specifically wanted to race Wilson Kipketer

3 weeks back to training

The Golden Leagues in Berlin and Zurich were his entrée to the World Championships

Then Brussels and Monaco

A month back in South Africa with somewhat subdued training before leaving for the All Africa Championships in Abuja, Nigeria from 14-17 October

21 races in all with a high level of consistency

#### **(Training 5 – The Tactical Component)**

There is little or no room for error in a fast 800m. It is seldom won from the front

If the race slows other athletes, perhaps not so durable but with good 400m speed and strength, can express themselves

Mbulaeni and I have studied most videos of his races and the things we stressed most are

- Maintaining a position in 3<sup>rd</sup> or 4<sup>th</sup> but in touch with the leaders so as to cover any breaks from the front and from behind
- In the second 400m, if on the kerb, and the pace is relatively slow try not to lose it for fear of being overtaken and then being boxed in
- Staying alert to (a) how fast are we running ie time at the bell and (b) to all tactical moves by the rest of the field ie the unexpected

Holding the kerb is exactly what we spoke about at the 2002 Commonwealth Games and which he applied so effectively in the semi-final and final

The World Champs was a relatively slow first lap. Borzakovsky was predicable, Mbulaeni went to sleep and didn't react quickly enough and Said Guerni took his chances. Only two athletes have broken 1:43 this season (perhaps as a prelude to Olympic Year). Neither of them won gold or silver

The single feature that stands out in most spectators minds is Mbulaeni's fierce competitiveness and his superior tactical awareness when compared to Hezekiel Sepeng

#### **The Training Environment**

Of course having all the theory and a highly successful athlete doesn't tell the full story. I immigrated to South Africa in 1988 to take up a position as Senior Sports Officer at the Vaal Triangle Technikon, 50mins south of Johannesburg. I had one athlete who could just manage 1:59 for the 800m. Today, nearly 15 years later, we boast the likes of Mbulaeni Mulaudzi at 1:42 and Chris Harmse, the Commonwealth record holder in the hammer at 80.19m

I currently coach 5 international runners who have competed for South Africa

We also boast of athletes who have run 1:42.89 (800m), 3:39.70 (1500m), 8:35.67 (3000m Steeplechase), 13:36.55 (5000m and still the South African junior record for the event), 28:39.22 (10 000m), 61.42 (1/2 Marathon) and a 2:14:16 (Marathon). We are generally regarded as the most talented and diverse training group in South Africa

We are an open club with a current membership of 68 athletes and attract many of South Africa's top runners. Two of the Special Sports Bursaries mentioned in the next section are awarded to non-students. This has, more than anything else, pulled up the standard of our athletics and in particular the middle and long distance events

#### **Financial Considerations**

For the financial year 2003 we distributed a total of R106 000.00 in Sport Merit Bursaries between 17 student athletes

In addition to this I negotiated 3 Special Sports Bursaries valued at R23 000.00 each, one whom was awarded to Mbulaeni

The above funds come from my Institution

We are supported in a variety of ways by Athletics South Africa and NOCSA our National Olympic Committee in terms of financial support, medical bills, travel etc

Mr Price, our local clothing distributor, provides monthly salaries to 6 of our runners worth a total of R207 000.00 per annum

The South African Student Sports Union (SASSU) provides a total of R17 500.00 which is distributed to 9 of our athletes

For 2003 I secured R400 100.00 for the athletes not counting the help from ASA and NOCSA

The athletes are focused, generally well disciplined and have knitted well together within the club environment

A sponsored vehicle for the hammer thrower and clothing, shoes and dietary supplements also help to make up the total package

But the greatest amount of support comes from my Institution. Together with my department, our Executive Sports Council and last, but not least, my Rector Professor Aubrey Mokadi the Institution has been unrelenting in it's unselfish financial and moral support

Mbulaeni is assisted by two Agents, Peet van Zyl in Johannesburg and Jukka Harkonnen in Helsinki, Finland





## The Future

Mbulaeni has fulfilled all his goals to date ie the final in Edmonton, the Gold in Manchester and a medal in Paris. I believe it was going so well that the gold should have been his.. He failed in one goal though as it was his intention to break Hezekiel Sepeng's national record of 1:42.68. However .2 of a second is not a 'train smash'

We have parted company at this point

3 goals lie ahead. They are an Olympic gold, a new South African record and then to be a member of that exclusive sub1:42 club. That could make an assault of the world record a little more realistic – who knows?

To do that a number of things are needed

- An expansion of the preparation phase for a more solid foundation
- Continued work on the speed and strength endurance components
- A lowering of the 400m time to a low 46secs under normal race conditions

I am convinced he has the machinery to do it and think that the lowering of the 400m time may well be the missing link in the jig saw puzzle

Thank you UK Athletics, the British Milers Club and Norman Poole for the invitation

What an honour!

Thanks also to Pat Fitzgerald, John Cooper, Bud Baldaro, Dave Sunderland, Liam Cain, George Gandy and Mathew Fraser-Moat for looking after me

Thank you for listening to me – hardly 'rocket-science' is it?

IAN HARRIES  
(Senior BAF Coach/IAAF Lecturer)  
ENDURAMAX RUNNING CONSULTANCY

Birmingham – October 2003



Wythenshawe, 31.5.03. EMILY PIDGION. photo by Mark Shearman.



Paris, 27.8.03. JO PAVEY. photo by Mark Shearman.

## BMC NATIONAL COACHING SYMPOSIUM October 11th - Birmingham University

Organised by Dave Sunderland and supported/promoted jointly by the BMC and UKA.

The day commenced with an introduction from Zara Hyde Peters (World Class Performance Director-UKA). After her opening remarks she introduced Ian Harries, until recently, coach to Mbulaeni Mulaudzi-Commonwealth Games 800 Champion and Bronze Medallist at the recent Paris World Championships. (Editors Note:- He WON heat, semi-final and of course final in Manchester plus heat and semi-final in Paris.)

Ian, whose lecture appears in full in this magazine, outlined his coaching methods and philosophy as they were applied to his star athlete. He took him from 1/48 to sub 1/43. Ian generously took questions at the end of his talk.

Ian was followed by Alan Storey (UKA Technical Director for Endurance). He gave a quick-witted, hard-hitting, "no prisoners taking" lecture. Amongst other points he drew attention to the relatively few middle-distance runners in Paris from Western Europe. His outspoken comments left few in doubt as to what was needed.

After lunch a number of clinics were held concurrently and appeared to be well attended and received. This is no surprise when one considers that those attending these clinics had the opportunity to speak with some of the few UK coaches who had coached athletes to medals at Major Games/Championships in the endurance events. These included George Gandy, Norman Poole, Mark Rowland, Alan Storey, Neville Taylor, and Bruce Tulloh.

The last session was a "One to One" interview with Olympic Bronze Medallist and coach to Hayley Tullett and Michael East, Mark Rowland. With "Inquisitors" Norman Poole and Dave Sunderland sitting on either side of him he answered questions very fully and openly. He traced his career with reference to Matt Pattison, Steve Ovett and Alan Storey, before taking further questions from an engrossed audience.

The day was a success and thanks are due to all involved in its arrangement. The exchange of ideas can only be good for the sport.



## As Cilla Says . . . “Bring on the Girls”



Watford, 5.7.03. ALISTAIR MOSES (325) wins from PAUL HAMBLIN (New Zealand, 329) and NEIL GAMESTER (327) in the men's 'B' 1500m. photo by Mark Shearman.

It would require the keen track fan to have been on another planet not to have noticed the success of British female middle-distance runners this season. The achievements of Hayley Tullett, Kelly Holmes and Jo Pavey at the Paris World Championships are chronicled elsewhere in this magazine. They, together with Jo Fenn and Charlotte Moore, performed with distinction.

In the European Under 23 Championships Lisa Dobriskey won a bronze medal at 1500 with a PB of 4:12.95 Natalie Lewis, ninth in the final, ran a PB of 4:14.10 in her heat as did Louise Whittaker with 4:15.31 in her heat, being twelfth in the final. These are more than praiseworthy performances. With Rebecca Lyne topping them all with a 2:04.66 Gold Medal at 800 our cup was over-flowing.

The European Under 20 Championships the girls were at it again. Charlotte Moore, silver medal at 800, 2:03.40, Jemma Simpson, bronze, with 2:03.42, and Rachel Thompson seventh, 2:06.52. What riches! At 1500, Danni Barnes took silver with 4:16.91, Faye Fullerton seventh with 4:20.87(PB) and Katrina Wootton was eleventh with 4:26.60. IAAF World Youth Championships. Laura Finucane was fifth at 800, 2:05.90 and Morag McLarty eighth with 2:10.42. At 1500 Charlotte Browning took sixth with a PB of 4:22.16.

The European Youth Olympic Festival had Hannah England notching sixth in the 1500 with 4:32.7.

My apologies to the men but the overall record of the girls( and I apologise if anyone was omitted) was outstanding and is one the BMC can take pride in having played a part, as Keith Browning has implied. Next year we have the World's Juniors in Italy, roll on!

## Letter to the Editor via Tim Grose

Dear Tim,

It is a great honour for Charlotte to be selected for the World Youth Championships but also a great reflection of the new BMC which has been revitalised in the past five years. Charlotte's progress seems to mirror the success of the BMC in that time her running career started in 1999 and she became a member in 2000.

She has thrived on the competitive edge that is seen in every BMC event and as the standard has risen she has risen with it. Please pass on mine, and Charlotte's thanks to all the BMC officials that make these races possible and I hope that this proves that you have got it all just about right.

Regards,  
Keith Browning. (1.7.03)



Wythenshawe, 31.5.03. JEMMA SIMPSON wins the 800m. from LISA DOBRISKEY. photo by Mark Shearman.







Paris, 31.8.03. HAYLEY TULLETT. photo by Mark Shearman.

The following list has been compiled by a contributor and does not reflect the views of the BMC Committee.

#### "Britain's Twenty Best Middle Distance Coaches"

Compilation has been made on the following basis.

- 1) Athletes coached have broken world records.
- 2) Athletes coached have won medals at the Olympics, Commonwealth Games, and World Cross-Country Championships.
- 3) Athletes coached who have made the GB senior or junior teams.
- 4) The ability to impart knowledge via books, articles, and lectures.

Those selected are not listed in order of preference.

John Andersen, Northants. Wilf Paish (Yorks.) Peter Coe (London)  
 Jimmy Hedley (Tyneside) George Gandy (Leics.) Gordon Surtees (Tyneside)  
 Norman Poole (Cheshire) Bob Parker (Middx.) Bryan Smith (Herts.)  
 John Sullivan (Middx.) Tony Elder (Sussex) Conrad Milton (Middx.)  
 Bud Baldaro (Notts.) Frank Horwill (Middx.) Mark Rowland (Sussex.)  
 Neville Taylor (Middx.) Alan Storey (Surrey) Dave Sunderland (Staffs.)  
 Tommy Boyle (Scotland) Dave Arnold



Solihull, 6.8.03. STEVE VERNON (64) leads from ELIGAH WANDER KIHARA (Kenya).  
 photograph by Mark Shearman.



# Many Roads Lead to Rome, or near to it!

The training of Neil Ovington (1:48.48-3:43.2-3:57.07) in the late 1980's.

## In Winter

Sun - horsendon hill (before it was allowed to be a nature reserve) 8 Long Hills, Short Hills, 8 Hill strides

Mon - 5 at 5-5.10 min mile paceish

Tues - Track 12 x 400(60 recover) as I felt (usually 64-68)

Wednesday 7 - As I felt usually about 5.30 min mile pace

Thursday - Weights/Circuits

Friday 5 slow (I didn't know the meaning of slow in those days)

Sat 8 x 4 mins on grass 1 min recover am/ Drills(bounding etc...) pm

## In Summer

Sun - 2 x 2 x 400(in 51-52, 30 seconds rest, 5 mins recover)

Mon - Strides on Grass

Tuesday - Hollow 1000's 3 x 1000 (400 in 60, Jog 200 in 40, 400 in 56)

Wednesday 5 as I felt

Thursday 5 x 300 in 45-48

Fri Easy 5

Saturday Race



Watford, 5.7.03. REBECCA LYNE. photo by Mark Shearman.



Watford, 5.7.03. RICKY SOOS receives a cheque from NORMAN POOLE for £750.00 awarded after SOOS broke the BMC member's 800m. record. photo by Mark Shearman.





# Mind Games Will Give You a Head Start in Sport

by Derek Parker (Level 4 Coach)

American essayist Ralph Waldo Emerson (1803-82) wrote: "A man is what he thinks about all day long."

His compatriot, William James (1842-1910), declared: "Human beings can alter their lives by altering their attitudes of mind."

The gist of these inspirational words is you are what you think. Your mind is the key to the real you whose hidden powers wait to be unlocked. There is more to athletics success than just running. Athletics is 100 per cent physical but it's also 100 per cent mental. Runners wanting to maximise their potential must prepare psychologically as well as physically for competition.

Athletes require mental qualities of courage, determination, commitment, perseverance, resilience, the ability to overcome negative influences and the indomitable desire to get the very best from themselves.

Elementary to physical and mental preparation is motivation - a quality described as an incitement to action. Motivation can be external or internal. External motivation is provided by prizes, cheering spectators, the prospect of fame, and encouragement from family, friends and coaches.

Internal motivation, originating deep within the human psyche, comes from a pride in one's performance, self-respect, the desire to do well and the ability to keep going when confronted with adversity.

Internally-motivated athletes are frequently mystically-inclined. They regard training and competition as a form of self-expression. They envisage races and training sessions as steps on the personal path to self-fulfilment and enlightenment.

It is estimated humans use less than 10 per cent of their mental faculties in their daily routines. They rely on computers, calculators and automation to think for them. People who don't exercise their bodies become less fit physically. Likewise, people who don't use their minds stultify mentally.

Unless the athlete's mental qualities are nurtured and developed, they will deteriorate with a corresponding decline in performance. The Roman concept of 'a healthy mind in a healthy body' is especially relevant to athletes.

Setting meaningful targets is vital in mental training. Your goals should be difficult but realistic. Poet Robert Browning (1812-89) could have had athletes in mind with his dictum: "Unless a man's reach exceeds his grasp, then what's a heaven for?"

Goals should be recorded in your training diary or displayed prominently on your wall as constant reminders. A famous high-jumper once reckoned he needed to clear a certain height to win an Olympic gold medal.

He marked that height on every door of his house. Each time he went in and out of the rooms, he looked at the mark and reminded himself he would clear that height and fulfil his ambition. He won his gold medal.

Olympic decathlon champion Bruce Jenner set up a hurdle in the living room of his home. Each time he passed it, he performed a hurdle drill over the barrier.

Don Thompson, Olympic 50-kilometre walk champion in the 1960 Rome Olympics, acclimatised for the searing Italian heat by rigging up a gymnasium in a steaming-hot bathroom in his house.

And Emil Zatopek, triple Olympic champion in the 5K, 10K and marathon at the 1952 Helsinki Olympics, developed his stamina by filling a bath with the soaking-wet family washing and running on top of it for an hour - simulating a cross-country training run. These great athletes showed where there's a will there's a way.

They epitomised the British Miler's Club philosophy: "When the going gets tough, the tough get going" - but you must be tough mentally, as well as physically.

One of the following quotations could become your motto and inspire you to top-class performances: "Without toil, there triumph but a few": (Greek poet Pindar 522 BC - 440 BC); "Cast not out the hero in your soul": (German philosopher Friedrich Nietzsche 1844-1900).

And what about: "When the One Great Scorer comes to write against your name, he will not write if you won or lost, but how you played the game": (English writer Rudyard Kipling 1865-1936); "What have we in life but courage, energy and will-power?": (German poet Johann von Goethe 1749-1832); and "What lies before and behind you depends on what lies within you." (American essayist Ralph Waldo Emerson 1803-82).

Your motto should be one you believe in and reflects your philosophy in life and sport. It links you subconsciously to the hidden powers dormant within you. These untapped inner strengths transform men and women into sages and saints and mere mortals into athletic heroes and, in some instances, immortals.

It is your vision of yourself which enables you to discover your destiny and how to realise your potential as an athlete and a person.

Athletics is a journey to personal fulfilment and one which should enhance the quality of your life and give you a purpose.

By progressing along the path - learning from your experiences and working towards worthy goals with the assistance of an intelligently-planned mental and physical training programme - you can become the person and athlete of your dreams. You can become the real you.

*Derek Parker is a Level 4 Coach with Master of Arts and Bachelor of Divinity Honours degrees.*



Solihull, 6.8.03. ZARA HYDE-PETERS paces KATHRYN FROST (7) and her sister BRYONY FROST (6) in the 5km. photo by Mark Shearman.



## BMC Rankings 2003

*performances in BMC races only*

Compiled by Tim Grose

### Men 800

1:46.6	Ismael Ahmed * U20	1:52.48	Mark Sanford SEN	1:55.26	Ben King SEN	1:57.91	Iain MacCorquodale * SEN	2:02.1	Chris Baddick * U17
1:46.68	Ricky Soos U23	1:52.54	Martin Airey SEN	1:55.26	David Reader SEN	1:57.92	Mathew Almond U23	2:02.13	Chris Sargent * U20
1:46.82	Gary Reed * U23	1:52.56	Brian Stophor SEN	1:55.27	Matt Warley U20	1:57.97	Daniel Quinn U17	2:02.13	Alex Wall-Clarke U17
1:47.1	Neil Speaight SEN	1:52.57	Tom Nimmo SEN	1:55.3	Iain Murdoch SEN	1:57.98	David Wallace * U17	2:02.18	Robert Morter * U17
1:47.77	Brian Berryhill * SEN	1:52.57	Andy Knight SEN	1:55.3	Matthew Harkess * U23	1:58.1	Matthew Birchall * SEN	2:02.37	Michael Tanner * U20
1:47.8	Roman Oravec * SEN	1:52.61	Joseph Maynard * U20	1:55.31	Craig Pearson U23	1:58.1	James Wardman SEN	2:02.4	Simon Fraser * SEN
1:48.08	Joel Kidger SEN	1:52.67	David Proctor * U20	1:55.32	Alex Tanner SEN	1:58.2	Glenn Garrett * U23	2:02.6	John Moore SEN
1:48.2	Chris Moss SEN	1:52.7	Richard Ward U23	1:55.33	Ben Harding U17	1:58.26	Shugri Omar * U20	2:02.63	Andrew Donaldson * U20
1:48.27	Daniel Caulfield * SEN	1:52.82	Steven Fennell U20	1:55.38	Sandy Scott SEN	1:58.31	Paul Miller * U23	2:02.7	Daniel Stepney * U17
1:48.3	Chris Reynolds U20	1:52.85	Martin Flook U23	1:55.38	Gary Davenport U20	1:58.4	Koti Agyei * SEN	2:02.73	Richard Lang * U17
1:48.50	Jason Stewart * U23	1:52.86	Chris Lamb U20	1:55.39	Nick Samuels U23	1:58.5	Chris Lamb U20	2:02.77	Chris Mulroy * U20
1:48.54	Sam Ellis U23	1:52.89	Neil Bangs SEN	1:55.4	Michael Dyer * U20	1:58.52	Ed Lake * U20	2:02.96	Cori Stanton * U17
1:48.55	James Nasrat U23	1:52.95	Richard McDonald * SEN	1:55.46	Adam Mitchell * U20	1:58.55	Paul Bradshaw * U17	2:03.20	Gareth Jones * U20
1:48.6	Hassan Ismail * SEN	1:52.96	Garth Watson SEN	1:55.5	Ryan McLeod * U20	1:58.56	Jonathan Ferguson * SEN	2:03.2	Andrew Inskip U17
1:48.61	Tam Alexander SEN	1:53.07	Richard Menzies * SEN	1:55.51	Danny Crates SEN	1:58.57	Neil Hawkins * U23	2:03.2	Rob Mullett U17
1:48.63	Gavin Massingham U23	1:53.10	Feidhlim Kelly * U23	1:55.51	David Reid * SEN	1:58.59	Robert McGill * SEN	2:03.21	Stuart King * U17
1:48.75	Mike East SEN	1:53.12	Darren Gauson U23	1:55.53	David Moulton U23	1:58.6	Sam Kissi U17	2:03.24	Paul Drake U20
1:48.8	Gareth Turnbull SEN	1:53.14	Kevin Griffin * U23	1:55.60	Chris Gowell * U20	1:58.6	Bryan Brett * U23	2:03.35	Gary Stanton * U20
1:48.87	Brendan O'Shea * SEN	1:53.16	David Campbell U23	1:55.66	Robert Goodwin U20	1:58.61	James Ellis * U20	2:03.37	Simon Smith * U20
1:48.95	Tim Bayley U23	1:53.18	James Hogg U23	1:55.69	Paul Ashley SEN	1:58.7	David Boughey U23	2:03.37	Chris Douglas * U17
1:48.96	Tom Mayo SEN	1:53.24	Graeme Oudney U20	1:55.70	Richard Dowse U20	1:58.71	Sam Walsh U17	2:03.39	Robert Poulter SEN
1:49.07	Terry Feasey SEN	1:53.30	Phil Winfield U20	1:55.72	Andrew Whetstone U20	1:58.72	Abdi Igi * U17	2:03.4	Sam Dalgleish * U15
1:49.13	Steve Turvill SEN	1:53.32	Ian Salisbury * SEN	1:55.73	Luke Gunn * U20	1:58.76	Steven Heathcote * SEN	2:03.6	Emile Tambbeh * U23
1:49.13	K. M. Bimu * SEN	1:53.39	James Hayden SEN	1:55.79	Andy Thomas * SEN	1:58.84	Graeme Osborne * SEN	2:03.71	Nicolas Phillips U17
1:49.18	Rob Watkinson SEN	1:53.4	Phillip Tulba SEN	1:55.79	Ewan Simpson * U17	1:58.88	Richard Warburton * U20	2:03.78	Ross Finlayson * U17
1:49.2	Alazmi Mohammed * SEN	1:53.46	Scott Pilkington U20	1:55.80	Andy Prophet SEN	1:59.01	James Neeves * U17	2:03.90	Darren Froggatt * U20
1:49.20	Derrick Peterson * SEN	1:53.42	Dean Clark SEN	1:55.86	Steve O'Neill * U17	1:59.02	Tom Marley * U17	2:04.00	Adrian Quickster * U23
1:49.29	Ebrima Ceesay U23	1:53.46	Nicholas Buck * U23	1:55.87	Roger Morley SEN	1:59.04	Tom Druce * U17	2:04.08	John Burleigh * U20
1:49.32	Andrew Brown SEN	1:53.46	Chris Livesey SEN	1:55.87	Mike Roberts SEN	1:59.07	Rich Airey * SEN	2:04.08	Steven Cockrell * U20
1:49.33	Michael Rimmer * U20	1:53.40	Dan Hermann * U23	1:55.89	Chris Bird U23	1:59.10	Richard Wallace * U20	2:04.10	Andrew Flett * U23
1:49.6	Rob Hooton SEN	1:53.42	Lee Bowron * U20	1:55.9	Mark Milligan * SEN	1:59.15	Daniel Pettit * U20	2:04.2	Richard Hoad * U17
1:49.65	Raymond Adams U23	1:53.44	Pat Davis SEN	1:55.9	Matt Furber U20	1:59.18	Sam Wyatt * U20	2:04.37	Kyle Allen * U17
1:49.73	Ed Jackson U23	1:53.46	Adam Watt * U20	1:55.93	Alexander Pritchard * U20	1:59.20	Craig Bravington U17	2:04.5	Iain Stuart * SEN
1:49.79	Stephen Davies U20	1:53.46	Dave Ragan U23	1:55.95	Matt Wood U17	1:59.2	Jonathan Randle U20	2:04.5	Josh Downing * U15
1:49.79	Alasdair McLean-Foreman * U23	1:53.48	Matthew Nicholson * U23	1:55.96	Chris Heam U23	1:59.31	Peter Crosby * SEN	2:04.61	Jason Pedley * U20
1:49.82	James Thie SEN	1:53.6	Chris Smith * U20	1:56.01	Alistair Campbell * U20	1:59.32	Jonny Ayres * U17	2:04.78	Oliver Berry * U20
1:49.88	Rees Boug * SEN	1:53.61	Martyn Gordon SEN	1:56.05	Ross Glover U20	1:59.4	Tom Patton * U17	2:04.78	Tim Grose SEN
1:49.92	Neil Dougal SEN	1:53.66	Ric Sumner SEN	1:56.1	Colin Miles SEN	1:59.4	Matt Bristow * SEN	2:04.94	Michael Long * U20
1:49.94	Tony Draper * SEN	1:53.69	Mark Wiscombe SEN	1:56.2	Stephen Rae * SEN	1:59.45	Lee Cassidy * U20	2:05.1	Matthew Young U15
1:49.96	Gary Vickers SEN	1:53.70	Ben Green U20	1:56.2	Andrew Rayner * U23	1:59.6	Rory Newton * U20	2:05.13	D Watson * V40
1:50.03	Andy Young SEN	1:53.70	Richard Weir U20	1:56.26	Dan Acheson U23	1:59.7	Steven Hutson U17	2:05.15	David Shearer * U20
1:50.32	Oliver Teasel U20	1:53.7	Des English * SEN	1:56.3	Joe Mills SEN	1:59.7	Alan Piggford * U17	2:05.16	Steve Cowlishaw * SEN
1:50.32	Andy Baddeley U23	1:53.70	Ali Mohammed * U20	1:56.31	Clayton Bannan SEN	1:59.7	Scott Harris * U17	2:05.29	Daniel Grant * U17
1:50.34	Johan Klintskoj * SEN	1:53.73	Stuart Morland * U20	1:56.5	Paul Stokes * U20	1:59.76	Ben Craddock U17	2:05.40	Matthew Woods * U17
1:50.38	Lulu Basiinyi * SEN	1:53.75	Chris Warburton U23	1:56.5	Mark Herrera * U20	1:59.8	Russell Pittam SEN	2:05.4	Julian Rendall * SEN
1:50.40	James Parker SEN	1:53.78	Mark Goodger SEN	1:56.5	Andrew Robinson SEN	1:59.9	Robert Bates U17	2:05.53	Robert Dennes * U20
1:50.41	Christian Clement U23	1:53.78	Derek Watson * U23	1:56.56	Edd Alexander * SEN	2:00.04	Sam Bradley U17	2:05.86	James Phillips * U15
1:50.51	Paul Hambliny * SEN	1:53.80	Robert Nixon SEN	1:56.58	Steven Rusling * U17	2:00.1	Danny Malone * U17	2:05.89	Paul Hodgkinson * SEN
1:50.58	Dominic Hall SEN	1:53.8	Steven Pogue * U20	1:56.61	Karl McCulloch U20	2:00.10	Simon Minting * U23	2:05.9	Adam Bailey * U17
1:50.60	Michael Skinner SEN	1:53.86	Steven Redshaw U23	1:56.63	Fraser Dowling * SEN	2:00.24	Sam Barnes U20	2:05.92	Robert Hardyman * U20
1:50.7	John Rogers SEN	1:53.90	Tom Holden U20	1:56.68	Carl Scrowston * U20	2:00.30	Dale Williams * U17	2:06.02	Luke Evans * U20
1:50.81	Eoin Cummins SEN	1:54.01	Richard Pell * SEN	1:56.8	James Boxell * U23	2:00.38	Robert Datnow * SEN	2:06.2	Jack Walker * U17
1:51.02	Jamal Biro * SEN	1:54.03	Adam Vandenberg U20	1:56.8	Tom Warrender SEN	2:00.4	Jordan Butler * U20	2:06.57	David Wall * U17
1:51.08	Grant Robertson * SEN	1:54.09	Matthew Jones U23	1:56.82	Kevin Quinn * SEN	2:00.4	Ben Stock * U17	2:06.74	Michael Warner * SEN
1:51.08	Lea Farmer SEN	1:54.17	Steve Body SEN	1:56.82	Darrell Bellinger U20	2:00.4	Michael Quinn * U23	2:07.28	Owen Vale * U17
1:51.1	Stuart Bailey SEN	1:54.17	Robert Tobin U23	1:56.9	Kirk Wilson * U20	2:00.47	Stephen Borrill * U20	2:07.3	David Boyce * SEN
1:51.25	Richard Davenport U20	1:54.19	Tom Frazer * U23	1:56.9	Richard Clayton U20	2:00.51	Mark Harris U23	2:07.44	Darren O'Dea * SEN
1:51.28	Paul Laslett SEN	1:54.2	Martin Thomas * SEN	1:56.9	Terry Hawkey U20	2:00.59	Alex Dakers * U20	2:07.9	Simon Baker * U17
1:51.3	Abdalla Abdulgadir * U17	1:54.2	Steven Wright * SEN	1:56.92	James Bleakley SEN	2:00.60	David Kuchta * U20	2:08.20	Adam Tatlow * U17
1:51.32	Jamie Watkins * U23	1:54.20	Rob Elmore SEN	1:56.99	Nick Gold SEN	2:00.6	Alex Haynes * U20	2:08.2	Josh Painter * SEN
1:51.40	Ben Wiffen * U20	1:54.28	Gavin Parkinson SEN	1:57.00	Ian Hough SEN	2:00.68	Sean Dirrane * U20	2:08.45	Ben Walsh * U17
1:51.4	Andrew Fulford U23	1:54.3	Andy Teate U20	1:57.08	Stuart Laycock * U20	2:00.7	Joe Holden * U17	2:08.5	Michael Hunt * SEN
1:51.41	Gareth Hill * SEN	1:54.33	Andrew Ingle SEN	1:57.09	Kris Gauson * U17	2:00.7	Ken Harker SEN	2:08.58	Osma Ali * SEN
1:51.44	Adam Bowden U23	1:54.43	Paul Bristow * SEN	1:57.1	Chris Taylor * U23	2:00.7	Craig Ivemy U20	2:08.71	Lewis Cross * U15
1:51.45	Peter Walsh SEN	1:54.46	Axel Lonnqvist * SEN	1:57.10	Colin Joyce * U23	2:00.74	Adam Clansey * U23	2:08.72	Callum Fitzpatrick * U15
1:51.46	Matthew Barnes SEN	1:54.48	Laurence Chandy SEN	1:57.11	Andrew Walling SEN	2:00.77	Damien Moss * U23	2:08.8	Matthew Dumigan * U17
1:51.5	Bryan Conway SEN	1:54.56	Gavin Parkinson SEN	1:57.14	Michael Sawrey * U20	2:00.80	Jonathan Holt * U23	2:09.17	Ketan Desai U23
1:51.55	Adrian McGarva SEN	1:54.6	Paul Carron U23	1:57.15	Jamie Smith * U23	2:00.9	Joe Michaelson * U20	2:09.26	Francis Hooton * SEN
1:51.77	Rob Whittle U23	1:54.6	Shaun Moralee U20	1:57.26	Peter Emmett U20	2:00.98	Jason Atkinson U20	2:09.59	David Smith * U17
1:51.93	Lee Merrien SEN	1:54.61	Rob Hughes SEN	1:57.32	Simon Rusbridge U23	2:01.07	Karl Fitzmaurice * SEN	2:09.60	Daniel Blacker * U17
1:52.03	Nigel Carlisle * SEN	1:54.62	Darren Middleton SEN	1:57.4	Tom Bilham * U17	2:01.14	Neil Thorpe * U20	2:09.75	Harry Webb * U15
1:52.06	Andrew Dean U23	1:54.63	Ryan Davoile SEN	1:57.5	Ryan Stephenson * U20	2:01.18	Tony Garner * U23	2:09.86	Richard Beaumont * U20
1:52.09	Thomas Andersen * SEN	1:54.64	James Hogan * U20	1:57.54	Andrew Pickett U23	2:01.20	Duncan Blythe * U20	2:09.89	Ciaran Collins * U23
1:52.1	Gary Murray * SEN	1:54.71	Richard Griffiths SEN	1:57.6	Steffan North SEN	2:01.28	Tom Waldron * U20	2:09.93	Michael Cole * U15
1:52.14	Grant Cuddy SEN	1:54.72	Jordon West * U15	1:57.6	Ian Barrett * U23	2:01.35	Will Devenish U20	2:09.93	Conor Tiernan * U17
1:52.15	Oliver Barrett U20	1:54.74	Chris Hrynkow * SEN	1:57.64	Richard Workman * SEN	2:01.40	Nick Webber * U23	2:10.16	Josh Garrett * U15
1:52.20	Drew Graham U20	1:54.84	James Minter * U17	1:57.67	Danny Barks * U17	2:01.40	Henry Hammond * U23	2:10.2	Matt Southam * U17
1:52.31	Alasdair Donaldson SEN	1:54.86	Jonathan Long U17	1:57.7	Simon Manning * U20	2:01.4	Alex Budd U20	2:10.27	Chris Reade * U15
1:52.39	Russell Bentley U23	1:54.86	James Tydeman U23	1:57.7	John Saulters * SEN	2:01.46	Ross Douglas * U20	2:10.3	Dan Showkum * U20
1:52.43	Colin McCourt U20	1:54.91	Stuart Forbes * U20	1:57.7	Louis Jones SEN	2:01.5	Michael Ross * SEN	2:10.5	Nick Rutter * U15
1:52.46	Scott Sterling SEN	1:54.93	Steven Dunn U23	1:57.71	Craig Houston SEN	2:01.51	Alasdair Stewart * U20	2:10.8	Mark Burchett * U15
		1:55.03	Tom Gayle U23	1:57.72	Steve Cooper SEN	2:01.6	Nathan Elliott * U17	2:10.92	Ross Owen * U17
		1:55.06	Tuey Powell * U20	1:57.76	Tim Neill * SEN	2:01.65	Tom Hockedy * U17	2:11.22	Curtis Pearce * U15
		1:55.1	Kerr Johnstone U23	1:57.8	Scott Riley * SEN	2:01.66	Graham Townsend * SEN	2:11.47	Jonathan Boyle * U17
		1:55.13	Rhian Hasteley U20	1:57.8	Michael Morris SEN	2:01.7	Nick Duggan * U20	2:11.6	Jack Pearce * U15
		1:55.20	Adam Zawadzki SEN	1:57.82	Gareth Klepacz SEN	2:01.71	Abdul Kholm * SEN	2:11.93	Alan Sneddon * SEN
		1:55.20	Kieran Flannery U17	1:57.9	Paul Miles * U20	2:01.72	Russell England * U20	2:12.03	Andrew Cochrane * U17
		1:55.24	Frank Baddick U20	1:57.9	Paul Martin * SEN	2:01.78	Chris Brown * U17	2:12.1	Lee Cook * U17
		1:55.25	Richard Hill U20	1:57.9	Kojo Kyereme SEN	2:01.9	Nathan Shrub U17	2:12.22	Nick Jarvis * U17
		1:55.25	Mike Buntin SEN	1:57.90	Shaun Desport * U17	2:02.0	Francis Marsh * SEN	2:12.55	Edward Johnson * U20





2:12.74	Sam Trowbridge * U17	3:48.20	Colin McCourt U20	3:55.71	Darren Middleton SEN	4:01.68	Steven Richards * U23	4:11.53	Julian Hough U20
2:12.8	Nick Farrell * U15	3:48.29	Gearoid O'Connor * SEN	3:55.75	Gareth Klepacz SEN	4:01.7	David Reader SEN	4:11.76	Bryan Brett * U23
2:12.98	Julian Anderson * U15	3:48.3	Tom Snow U20	3:55.82	Rob Hughes SEN	4:01.73	Jonny Ayres * U17	4:11.9	Nigel Carlisle * SEN
2:13.28	Neil Bekker * U15	3:48.5	Mark Warmby * SEN	3:55.83	Andrew Brown SEN	4:01.75	Tom Bailey * U23	4:12.34	Darryll Barnby U20
2:14.4	Josh Moulard * U17	3:48.51	Anthony Moran * U20	3:55.86	Kerr Johnstone U23	4:01.84	Tom Russell * U20	4:12.54	Ian Whitfield U17
2:14.5	Chris Peacock * V40	3:48.54	Graeme Reid SEN	3:55.89	Phil Nicholls U23	4:01.99	Dave Webb * U23	4:12.8	David McCarthy * U17
2:15.60	Nathan Ashman * U15	3:48.57	John Laselle * SEN	3:56.04	Brian Stophen SEN	4:02.04	James Horsman U20	4:12.8	Nathan Shrub U17
2:15.75	Jake Meeking * U15	3:48.61	Ian Mitchell SEN	3:56.06	Paul Freary SEN	4:02.05	Mark Cowen * SEN	4:12.92	Gordon Phillips * U17
2:15.90	Chris Lardner * U17	3:48.62	Stuart Stokes SEN	3:56.09	Luke Northall * U20	4:02.06	James Philipson * U17	4:12.94	Phil Williams * U20
2:16.54	Daniel Price * U15	3:48.67	Kris Berry U20	3:56.1	Neil Addison SEN	4:02.13	Stephen Ames U20	4:13.06	Russell Forsbrook * SEN
2:16.9	Ryan Smoet * SEN	3:48.78	David Anderson SEN	3:56.27	Andrew Whetstone U20	4:02.14	Dan Dalmedo SEN	4:13.25	Joe Holden * U17
2:18.8	James Teuten * U15	3:48.8	Stuart Bailey SEN	3:56.37	Richard Burney * SEN	4:02.2	Shaun Moralee U20	4:13.28	Stephen Matthews U20
2:19.93	Alex Simmons * U15	3:48.82	Andrew Franklin SEN	3:56.48	Chris Bird U23	4:02.28	Patrick Martin * U20	4:13.45	Graham Russ * U20
2:20.52	Ben Saunders * U15	3:49.10	Mark Christie * U20	3:56.48	Tim Egerton U20	4:02.29	Lee Slater * U23	4:13.55	Steven Redshaw U23
2:20.8	Mark Challen * U15	3:49.2	Stephen Hepples SEN	3:56.57	Ben Warren * U23	4:02.31	Alan Smith * SEN	4:13.66	Craig Peters * U17
2:21.60	Duncan Stevenson * U15	3:49.29	Andrew Fulford U23	3:56.70	Tom Naylor SEN	4:02.42	Darryl May * SEN	4:13.81	Ben Green U20
2:22.63	Daniel Murrant * U15	3:49.37	Joel Kidger SEN	3:56.74	Adam Dyson * U23	4:02.5	Richard Girvan * SEN	4:14.06	Simon Type * SEN
2:23.20	William Davies * U15	3:49.5	Steve Body SEN	3:56.82	JP O'Brien * SEN	4:02.51	Pat Canavan U20	4:14.6	Neil Ovington V40
2:23.37	Mike Bayliss * U15	3:49.69	Gary Davenport U20	3:56.85	Dan Lewis * SEN	4:02.7	Andy Thomas U23	4:14.6	Francois Van Schalkwyk * SEN
2:24.7	Thomas Marsden * U13	3:49.7	Alex Hodgkinson * U20	3:56.9	Chris O'Connell * SEN	4:02.74	Damien Shaw * U20		
2:25.05	Chris Dennis * U13	3:49.80	James Parker SEN	3:56.93	Luke Gunn * U20	4:02.81	Tim Neill * SEN	4:14.83	Sam Bradley U17
2:25.29	Harry Hood * U15	3:50.0	Nick Goodcliffe U23	3:57.10	Nick Bromley * SEN	4:02.88	Delroy Simon * SEN	4:15.2	Mark Magill * U20
2:27.43	Peter Hare * U15	3:50.11	Clayton Bannion SEN	3:57.25	Lewis Cadman U20	4:03.10	Daniel Gurmin * U23	4:15.23	David Woods U17
2:28.42	Richard Felton * U13	3:50.13	Richard Vint * SEN	3:57.27	Mike Gregory SEN	4:03.22	Simon Mills * U20	4:15.32	James Whittington * U17
2:28.93	Davey Platt * U13	3:50.40	Royston Green U23	3:57.41	Mike Benford SEN	4:03.31	Laurence Cox * U17	4:15.42	Stephen Blake * U17
2:29.31	Ross Williams * U13	3:50.70	Andrew Ingle SEN	3:57.48	David Moulton U23	4:03.34	John McCole * SEN	4:15.53	Liam Barton * U23
2:31.21	Tristan Sellors * U15	3:50.81	Jonathan Blackledge U20	3:57.55	Tom Warrender SEN	4:03.37	Ian Grime SEN	4:15.64	Ashleigh Pain * U17
2:33.79	Matt Crow * U15	3:50.95	Noel Pollock SEN	3:57.6	Adrian McGarva SEN	4:03.49	Marc Elliott * U20	4:17.08	Gareth Turner * U20
2:38.73	Simian Wyatt * U13	3:50.97	Ryan Davoile SEN	3:57.63	Kevin Nash * SEN	4:03.80	Martin Williams * SEN	4:17.22	Sam Dalgleish * U15
2:44.78	Sam Sleaf * U13	3:51.06	Mark Pollard U23	3:57.70	Martin Hilton * SEN	4:03.81	Chris Lamb U20	4:18.44	Ben Cox U20
2:45.34	Michael Humphreys * U13	3:51.1	Martyn Cryer * U23	3:57.80	Ian Carter U23	4:03.9	Martin Mashford U17	4:18.53	Andy Bird * SEN
		3:51.10	Matthew Jones U23	3:57.85	Tommy Davies U20	4:03.91	Jonathan Taylor * U17	4:18.59	Ben Evans * U20
		3:51.18	Matthew Bowser * U23	3:57.9	Mark Buckingham U20	4:04.01	Louis Jones SEN	4:18.6	Andrew Roberts * U23
		3:51.20	Steve Vernon * SEN	3:57.92	David Wardle * SEN	4:04.06	Matthew Jones * U23	4:18.85	Robert McCarthy * U20
3:39.72	Andrew Graffin SEN	3:51.26	Ewen North SEN	3:57.95	Paul Erwood U20	4:04.07	Gary Taylor U20	4:20.16	Martin Rust * SEN
3:40.78	Keith Kelly * SEN	3:51.29	Simon Deakin SEN	3:57.95	Chris Hearn U23	4:04.27	Louis Hubbard * U20	4:20.35	Neil Taylor * U20
3:40.99	Gareth Turnbull SEN	3:51.42	Robert Nixon SEN	3:58.22	Matthew Ashton U20	4:04.42	Jassim Ali * SEN	4:20.47	Steven Cockrell * U20
3:41.0	Tom Mayo SEN	3:51.49	Robert Cole SEN	3:58.24	Richard Kemp * U20	4:04.66	David Bishop * U17	4:20.9	Sam Diston * U17
3:41.49	Neil Speaight SEN	3:51.5	Alex Wright * U23	3:58.24	Chris Hart U20	4:04.67	Paul Simmer * U20	4:21.8	Mo Rahim * U23
3:42.00	James McLroy SEN	3:51.91	Simon Plummer SEN	3:58.28	James Ellis * U20	4:04.85	Steven O'Brien * U23	4:22.01	Steven Quinn U20
3:42.26	Matt Shone SEN	3:51.96	Ryan McLeod * U20	3:58.28	Richard Kay * SEN	4:04.90	Phil Wicks * U20	4:22.36	Alex Wold * U17
3:42.53	Chris Livesey SEN	3:52.1	Ismael Ahmed * U20	3:58.40	Andrew Pickett U23	4:04.97	Jonathan Randle U20	4:23.94	Chris Friend U17
3:42.56	Tom Carter U23	3:52.12	Jesper Andersen * SEN	3:58.56	Peter Kellie * U20	4:05.02	Phil Clamp * SEN	4:24.03	Michael Wright * U17
3:42.86	Mark Miles * SEN	3:52.21	Richard Ashe SEN	3:58.6	Richard Newton U17	4:05.04	Tim Grose SEN	4:24.16	Ruahan Crichton * U17
3:43.02	Rees Buck * SEN	3:52.26	Nick Samuels U23	3:58.60	Moray Anderson * SEN	4:05.10	Roger Morley SEN	4:24.34	Warren Lewis * U17
3:43.02	Daniel Caulfield * SEN	3:52.29	James Williams U23	3:58.69	Gary Crossan * SEN	4:05.17	Kelvin Hardy * U17	4:24.39	Ashley Rymer * U15
3:43.16	Rob Whittle U23	3:52.29	Rob Elmore SEN	3:58.79	Richard Lee U23	4:05.2	Tom Bolton U20	4:25.1	Robert Poulter SEN
3:43.17	Mohamed Farah U23	3:52.3	Dermot Donnelly SEN	3:58.81	Rich Airey * SEN	4:05.45	Ben Paviour * SEN	4:25.24	Mike Tallis * U17
3:43.56	James Thie SEN	3:52.32	Alan Wales * U20	3:58.81	Chris Gillespie U23	4:05.5	Gary McElkerney * U20	4:25.24	Mike Tallis * U17
3:43.64	Neil Bangs SEN	3:52.33	Benedict Whitby SEN	3:58.82	Richard Kinsey U20	4:05.5	Daniel McCarthy * U23	4:26.10	Robert Allison * U17
3:44.01	Miklos Arpasi * SEN	3:52.41	Olly Laws * SEN	3:58.83	Paul McCloskey U20	4:05.56	Steve Hallas SEN	4:26.23	Mark Norris * U17
3:44.05	Bryan Conway SEN	3:52.44	Steffan North SEN	3:58.85	Dominic McAllister * U23	4:05.56	Steve Hallas SEN	4:26.43	Jon Norris * U17
3:44.19	Conor Sweeney U23	3:52.5	Dave Taylor SEN	3:58.87	Peter Emmett U20	4:05.90	David Awde * U20	4:26.64	Paul Douglas SEN
3:44.24	John Rogers SEN	3:52.51	Ian Boneham U23	3:58.94	Alastair Hay U20	4:06.23	Stephen Oleksy U20	4:26.9	Oliver Thwaites * SEN
3:44.51	Michael Skinner SEN	3:52.64	Eissa Qulom * SEN	3:59.04	Ben Whitworth * U23	4:06.5	Ryan Stephenson * U20	4:27.14	Greg Norman * U20
3:44.70	Tom Lancashire U20	3:52.73	Henry Hammond * U23	3:59.05	Rob Barton * U23	4:06.55	Gary Hynds * SEN	4:27.40	Chris Gallagher * U17
3:44.78	Ahmed El Radi * U20	3:52.92	Colin Costello * U20	3:59.10	Alistair Smith * U20	4:06.57	Bill Foster V40	4:27.44	Joe Tavener * U15
3:44.82	Jermaine Mays U23	3:53.09	Simon Everington SEN	3:59.15	Matt Wood U17	4:06.58	Darren Doyle-Howson * U20	4:28.96	Robbie Dale * U17
3:44.87	Mohammed Yacub * SEN	3:53.25	Kirk Wilson * U20	3:59.19	Chris MacKay * U20			4:32.04	Ashley Hanlon * U15
3:44.94	Phillip Tulba SEN	3:53.39	Steve Ablitt U23	3:59.23	Daryn Castle SEN	4:06.68	Paul Shannon * U20	4:32.7	James Budd * SEN
3:45.10	Angus Maclean SEN	3:53.44	Tom Penfold U20	3:59.25	Laurence Chandy SEN	4:06.9	Andrew Mawdsley * SEN	4:34.0	Mike Boucher * SEN
3:45.27	Aaron Lancel * SEN	3:53.47	Tom Doe U23	3:59.25	Karl McCulloch U20	4:07.2	Robert Datnow * SEN	4:35.00	Greg Smith * U15
3:45.50	James Bowler SEN	3:53.57	Neil Miller SEN	3:59.49	Ryan Falkner * SEN	4:07.3	Alex Haynes * U20	4:36.4	Gerard O'Reilly * SEN
3:45.5	Vickson Polonet * U20	3:53.58	Robert Goodwin U20	3:59.49	James Adie * SEN	4:07.6	Michael Dyer * U20	4:36.55	Lee Cook * U17
3:45.60	Abdalla Abdulgadir * U17	3:53.64	Paul Moores U20	4:00.1	Andrew Evans * SEN	4:07.68	Matt Murray * SEN	4:37.21	Tom Graver * U15
3:45.63	Adam Bowden U23	3:53.9	Gareth Raven * SEN	4:00.16	Peter Norris * U23	4:07.75	Daniel Evans U20	4:37.66	Phil Norman * U15
3:45.64	Scott Overall U23	3:54.00	Matt James U23	4:00.16	Chris O'Brien * SEN	4:07.77	Oliver Barrett U20	4:38.72	Ed Womersley * U15
3:45.70	Mattias Norling * SEN	3:54.02	Shugri Omar * U20	4:00.23	Tuey Powell * U20	4:08.0	Francis Marsh * SEN	4:38.89	Anders Russell * U17
3:45.87	Andy Baddeley U23	3:54.05	Paul Miles * U20	4:00.39	Ian Salisbury * SEN	4:08.0	Tom Waldron * U20	4:40.72	Tom Emmett U15
3:46.16	Rob Watkinson SEN	3:54.25	James Hayden SEN	4:00.4	Craig Ivey U20	4:08.1	Phil Macey * U17	4:41.11	Michael Holden * U15
3:46.18	Gary Murray * SEN	3:54.36	Steven Horn * SEN	4:00.46	Jonathan Phillips SEN	4:08.3	Steven Evison * U23	4:43.7	Ryan Hodgkinson *
3:46.2	Steve Sharp SEN	3:54.39	Jamie Atkinson U20	4:00.47	Jonathan Prowse * SEN	4:08.55	Scott Hazell * SEN	4:46.46	Sam Crawford * U17
3:46.2	Adam Zawadzki SEN	3:54.42	Russell Bentley U23	4:00.57	Ben Jones * U20	4:08.64	Mike Burrett * SEN	4:46.7	Ian Brannigan * SEN
3:46.23	Jonathan Riley * SEN	3:54.44	Lee Bowron * U20	4:00.6	Jonathan Gilby * SEN	4:09.01	Mark Mitchell * U17	4:49.62	Josh Arnold * U15
3:46.25	Alistair Moses SEN	3:54.46	David Udall * U20	4:00.61	Chris Bryant * U20	4:09.4	Brian O'Donoghue * SEN	4:51.10	Richard Farrow * U13
3:46.31	Tom Frazer * U23	3:54.82	Andrew Dunwoody * SEN	4:00.64		4:09.41	Gareth Tapper * U20	4:51.65	Nick Daniel * U17
3:46.36	Paul Hamblyn * SEN	3:54.88	Terry Hawkey U20	4:00.66		4:09.50	Stephen Dunn * U17	4:52.33	James Teuten * U15
3:46.4	Chris Reynolds U20	3:54.92	David Heath SEN	4:00.75	Chris Lamb U20	4:09.6	Jonathan Stewart * SEN	4:55.67	Lee Wilson * U13
3:46.45	Iain Murdoch SEN	3:54.93	Andy Young SEN	4:00.88	Sam Jacobs U20	4:09.76	Terry Stanley U17	4:55.97	Simon Gill * U15
3:46.52	Neil Gamester U23	3:55.14	Mike Buntin SEN	4:00.9	Andy Thomas * SEN	4:09.96	Andrew Friend U17	4:56.15	Scott Williams * U13
3:46.9	Chris Parr U20	3:55.18	Craig Pearson U23	4:00.94	Mark Kennedy * U20	4:10.1	Sean Dirrane * U20	5:00.72	Ben Coldray * U13
3:47.01	Richard Ward U23	3:55.27	Lee Emanuel * U20	4:01.1	Simon Burton SEN	4:10.15	Phil Hall * V40	5:01.09	Nathan Young * U13
3:47.4	Mark Sanford SEN	3:55.30	Nicholas Buck * U23	4:01.14	Ian Rawlinson * U20	4:10.36	Colin Light * U20	5:01.22	William Barnes-Smith * U15
3:47.47	Matthew Barnes SEN	3:55.36	Colin Miles SEN	4:01.19	Richard Corcoran * U20	4:10.38	Thomas James * U17		
3:47.54	Allen Graffin SEN	3:55.39	Paul Ashley SEN	4:01.2	Steven Pogue * U20	4:10.6	Hussein Jama * U17	5:32.79	Sam Brace * U15
3:47.58	Chris Warburton U23	3:55.47	Matt Whiting U20	4:01.25	Darren Talbot SEN	4:10.79	Alan Wray SEN		
3:47.64	Kent Soerensen * SEN	3:55.49	Marc Hobbs * U23	4:01.29	Paul Evans * SEN	4:11.12	Adam Elliott * U20		
3:47.67	Matt Lane * SEN	3:55.53	Alex Felce U17	4:01.31	Alan Smith SEN	4:11.17	Christian Folliot * SEN		
3:47.70	Rob Hooton SEN	3:55.61	Matt Barnes-Smith U20	4:01.42	Tom Holden U20	4:11.18	Andrew Inskip U17		
3:47.70	Spencer Barden * SEN	3:55.7	Julian Wilkie SEN	4:01.46	Matt Lockett * SEN	4:11.3	David Swinburne * SEN		
3:48.01	Lee Merrien SEN			4:01.51	Matt Raw SEN	4:11.5	Brendan O'Shea * SEN		

#### Men 3000

7:54.45	Chris Thompson U23
7:56.05	Chris Davies SEN
8:03.41	Fiachra Lombard SEN
8:04.25	Donald Naylor * SEN







4:36.09	Alexa Joel U23	4:55.49	Kirsty Hamilton U15	10:21.39	Alison Bellars U20
4:37.10	Sharon Morris SEN	4:55.57	Emma Whittaker-Axon * U20	10:22.17	Naomi Flanagan * U20
4:37.14	Julia Bleasdale U23			10:32.8	Shona Hughes SEN
4:37.24	Elizabeth Egan SEN	4:55.68	Shavaun Henry * U20	10:43.50	Sarah Tedd U17
4:37.65	Claire Robson * U20	4:56.26	Veronique Pittwood U17	10:43.87	Abbie Lawson * U17
4:37.69	Stacey Preston U15	4:56.29	Michelle Moore * U20	10:45.47	Michelle Stevens * U20
4:38.3	Phillippa McCrea * SEN	4:56.29	Kirsteen Young * U23	10:45.89	Veronique Pittwood U17
4:38.42	Julia Russell * U23	4:56.90	Louise McHale * U15	10:58.63	Abbie Williamson * U15
4:38.48	Charlotte Browning U17	4:57.62	India Lee U17	11:12.24	Suzanne Richards * U20
4:38.48	Ruth Love SEN	4:57.91	Rachel Townsend SEN	11:42.93	Michelle Jones * U20
4:38.48	Sian Davies * SEN	4:58.14	Eilish McColgan * U13	11:46.76	Natasha Barnes-Smith * U17
4:38.59	Gemma Turtle U20	4:58.22	Lynsey McNeill * SEN		
4:38.6	Laura Dowsing U15	4:58.5	Lisa Huston * U20		
4:38.66	Lorna Vyse U20	4:59.18	Beth Harris * U23		
4:38.89	Louise Durman U17	5:00.45	Grace Greenhalgh SEN	<b>Women 5000</b>	
4:39.37	Jo Brewer U23	5:00.60	Kiri Nowak U17	15:46.17	Rahab Ndungu * SEN
4:39.49	Ceri Mitchell U23	5:00.90	Claire Conway * U15	15:49.68	Debbie Robinson * V35
4:39.67	Jenny Harnett SEN	5:01.02	Emma Roper * U23	15:53.11	Louise Damen U23
4:39.84	Sarah Hopkinson U13	5:01.59	Laura Nurse U20	16:22.00	Morag McDonnell * SEN
4:40.05	Helen Zenner U23	5:02.05	Faye Manger * U20	16:28.42	Collette Fagan U23
4:40.09	Esther Evans SEN	5:02.31	Amanda Dalkins * SEN	16:36.31	Meredith Pannett SEN
4:40.60	Danielle Cross * U20	5:02.74	Carys Davies * U15	16:37.87	Hind Musa * U20
4:40.6	Sam Hart U17	5:02.8	Mary Dallat * U23	16:39.24	Aine Hoban U20
4:40.86	Zara Hyde-Peters V40	5:03.3	Laura Bickerstaff * U20	16:47.86	Ruth Proctor * U20
4:40.86	Louise Watson SEN	5:03.48	Eilidh Menzies * U15	16:53.67	Amy Waterlow SEN
4:41.3	Elizabeth McWilliams * U17	5:03.63	Debbie Nichol * U17	16:59.20	Bryony Frost U20
		5:03.81	Jolene Ennis * U17	16:59.33	Kathryn Frost U20
4:41.37	Connie Crone U17	5:04.06	Ellie Ley * U15	17:03.96	Jo Kelsey * SEN
4:41.39	Sarah Waldron U17	5:04.58	Amy Tanner * U20	17:18.86	Getenesh Tamirat * SEN
4:41.56	Danielle Walker U15	5:06.50	Christina Whitelaw * U17	17:46.74	Claire Holme U20
4:41.66	Carolyn Boosey U20	5:08.42	Georgina Furze * U15		
4:41.69	Vicky Tester SEN	5:08.67	Charlotte Aberdeen * U17	<b>Women 2000SC</b>	
4:41.96	Alice Naylor SEN	5:09.06	Eleanor Gard * U15	6:43.41	Clare Martin * SEN
4:42.04	Gillian Moss U15	5:10.07	Kate Davies * U20	6:44.17	Durka Mana * U17
4:42.36	Sarah Fensome SEN	5:11.21	Ruth Mitchell * U17	6:49.53	Jo Ankier U23
4:42.71	Olivia Kenney U17	5:12.82	Hayley Munns * U20	6:50.50	Kathryn Frost U20
4:42.76	Lindsay Kehoe SEN	5:16.76	Kyra Hawkins * U15	6:53.09	Claire Martin * SEN
4:42.84	Eloise Pittwood U20	5:17.23	Vicky Curtain * U15	6:54.27	Bryony Frost U20
4:42.84	Heidi Cayzer SEN	5:17.68	Laura Burge * U17	7:04.70	Elizabeth Egan SEN
4:43.07	Stephanie Barnes * U17	5:18.04	Alexia Trafford * U17	7:33.94	Louise Bardsley * SEN
4:43.60	Claire Tarplee * U15	5:18.86	Penny Gill * U20	7:43.85	Sarah-Jane Pickett * U20
4:44.83	Lucy Waterlow * SEN	5:23.80	Ellie Grant * U15	7:54.42	Shavaun Henry * U20
4:44.90	Samantha Crowe U17	5:23.91	Lauren Webb * U15		
4:45.03	Lucy McLoughlin * U13	5:25.06	Kalina Nowak * U15		
4:45.04	Josephine Rhodes U20	5:27.2	Vicky Clegg * SEN		
4:45.45	Hannah Jones * U17	5:31.59	Lauren Thomason * U15		
4:45.55	Leonie Smith U17	5:31.70	Rebecca Sleaf * U15		
4:45.75	Bethan Strange U17	5:33.34	Danielle Cocking * U13		
4:45.9	Olivia Walwyn * U23	5:34.14	Leanne Selman * U17		
4:45.98	Stephanie Twell * U15	5:35.62	Frances Norman * U13		
4:46.56	Nisha Desai U20	5:38.29	Kim Priscott * U15		
4:46.59	Bernadine Pritchett V35	5:40.21	Rose Penfold * U13		
4:46.60	Cara Dowden U17	5:44.58	Zara Turner * U13		
4:46.70	Michelle Speller SEN	5:45.4	Nichola McCaughey * SEN		
4:46.95	Lauren Cunningham U17	5:48.96	Samantha Price * U15		
4:47.33	Leonie Woodfinden * U17	5:52.00	Jessica Griffin * U15		
4:48.3	Sharon Marshall SEN	6:12.4	Kate Balchin * SW		
4:48.4	Nicola Fifield * SEN	6:12.4	Kelly Bond Vaughan * SW		
4:48.60	Katie Knowles U15				
4:48.62	Natalie McHale * U15	<b>Women 3000</b>			
4:48.96	Lucy Ferguson * U17	8:55.73	Yelena Burykina * SEN		
4:49.0	Cheryl Guiney * U20	9:13.72	Georgie Clarke * U20		
4:49.20	Laura Brenton * U20	9:14.24	Diane Henaghan * V35		
4:49.27	Helen Bebbington SEN	9:14.78	Bev Jenkins * SEN		
4:49.31	Joanna Callaway * U17	9:14.88	Hayley Owens * SEN		
4:49.41	Emma Satterly SEN	9:25.63	Morag McDonnell * SEN		
4:49.49	Clare Thorne * SEN	9:26.62	Louise Damen U23		
4:49.55	Katie Greenwood * U20	9:28.74	Emily Pidgeon U15		
4:49.6	Lynn Lyness * SEN	9:33.78	Laura Kenney U20		
4:49.68	Emma Lambourne * U15	9:33.87	Catherine Dugdale SEN		
4:50.23	Elinor Kirk * U15	9:34.41	Tara Krzywicki SEN		
4:51.00	Claire Bassill U23	9:37.20	Aine Hoban U20		
4:51.11	Alison Bellars U20	9:39.95	Danielle Barnes U20		
4:51.16	Allison Starling * U17	9:44.18	Juliet Potter * U23		
4:51.4	Ashley Gibson * U20	9:44.26	Meredith Pannett SEN		
4:51.74	Hollie Knight * U15	9:51.66	Claire Smallwood SEN		
4:51.78	Laura Bache U15	9:54.36	Claire Holme U20		
4:51.9	Jill Shamon * U23	9:57.79	Leonie Smith U17		
4:51.95	Sarah Tedd U17	9:58.33	Stacey Preston U15		
4:52.1	Suzanne McCormick * SEN	9:58.52	Charlotte Browning U17		
4:52.1	Angela Hunter * U23	10:02.24	Emma Pallant U15		
4:52.9	Kath Woods SEN	10:03.06	Genni Gardner * U20		
4:52.97	Laura Tanner U17	10:05.30	Helen Pearson U23		
4:52.97	Emma Whittaker * U20	10:05.86	Karrie Hewitt * U20		
4:53.14	Julia Orr U17	10:06.22	Sarah Willmott * U23		
4:53.75	Gemma Curley * U17	10:07.81	Michelle Lee SEN		
4:53.77	Karen Yule * SEN	10:09.34	Katherine Humphreys * U20		
4:54.12	Helen Glover * U20	10:10.23	Rachel Goddard * SEN		
4:54.52	Natalie Sutton U15	10:19.26	Angela Hunter * U23		
4:55.12	Jemima Twist *	10:20.89	Becky Ellis * U17		

#### Women 5000

15:46.17	Rahab Ndungu * SEN
15:49.68	Debbie Robinson * V35
15:53.11	Louise Damen U23
16:22.00	Morag McDonnell * SEN
16:28.42	Collette Fagan U23
16:36.31	Meredith Pannett SEN
16:37.87	Hind Musa * U20
16:39.24	Aine Hoban U20
16:47.86	Ruth Proctor * U20
16:53.67	Amy Waterlow SEN
16:59.20	Bryony Frost U20
16:59.33	Kathryn Frost U20
17:03.96	Jo Kelsey * SEN
17:18.86	Getenesh Tamirat * SEN
17:46.74	Claire Holme U20

#### Women 2000SC

6:43.41	Clare Martin * SEN
6:44.17	Durka Mana * U17
6:49.53	Jo Ankier U23
6:50.50	Kathryn Frost U20
6:53.09	Claire Martin * SEN
6:54.27	Bryony Frost U20
7:04.70	Elizabeth Egan SEN
7:33.94	Louise Bardsley * SEN
7:43.85	Sarah-Jane Pickett * U20
7:54.42	Shavaun Henry * U20

\* indicates a non member

#### Summary

In 2003 BMC had:

14 Venues for meetings

25 Meetings

231 Races

1275 Athletes finished at least 1 race  
(422 were women, 853 men)

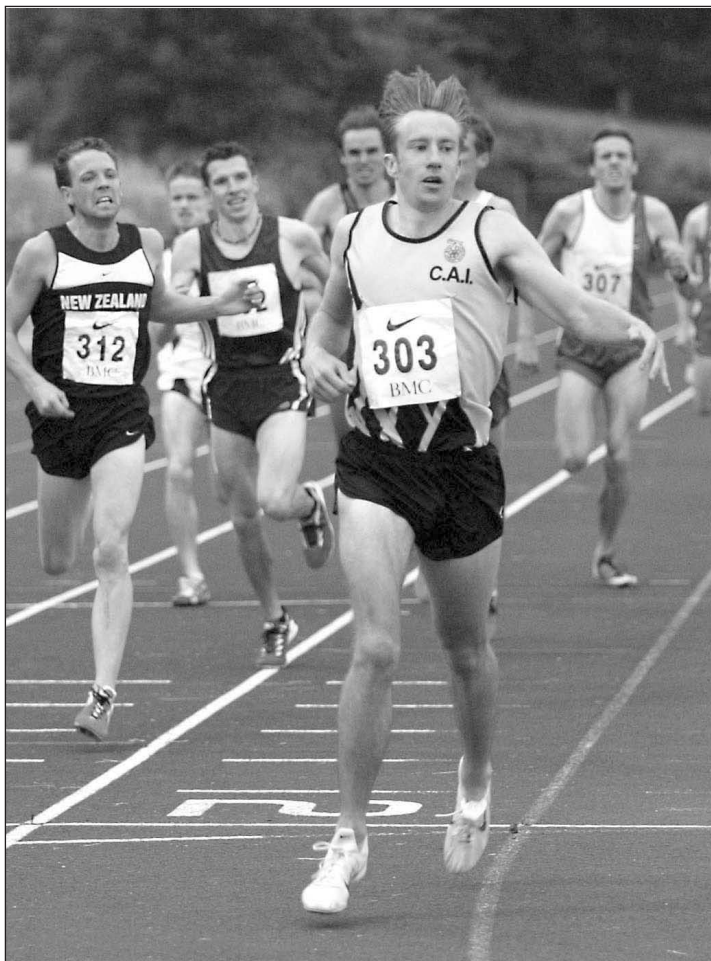
2284 Finishers in all races  
(706 were by women, 1578 by men)

Most races by an athlete:  
8 Gillian Moss, Mark Sanford

Complete BMC rankings for this and previous seasons and also current UK ranking lists can be found on the BMC website [www.britishmilersclub.com](http://www.britishmilersclub.com)

Corrections are welcomed by Tim Grose [timgrose@britishmilersclub.com](mailto:timgrose@britishmilersclub.com)





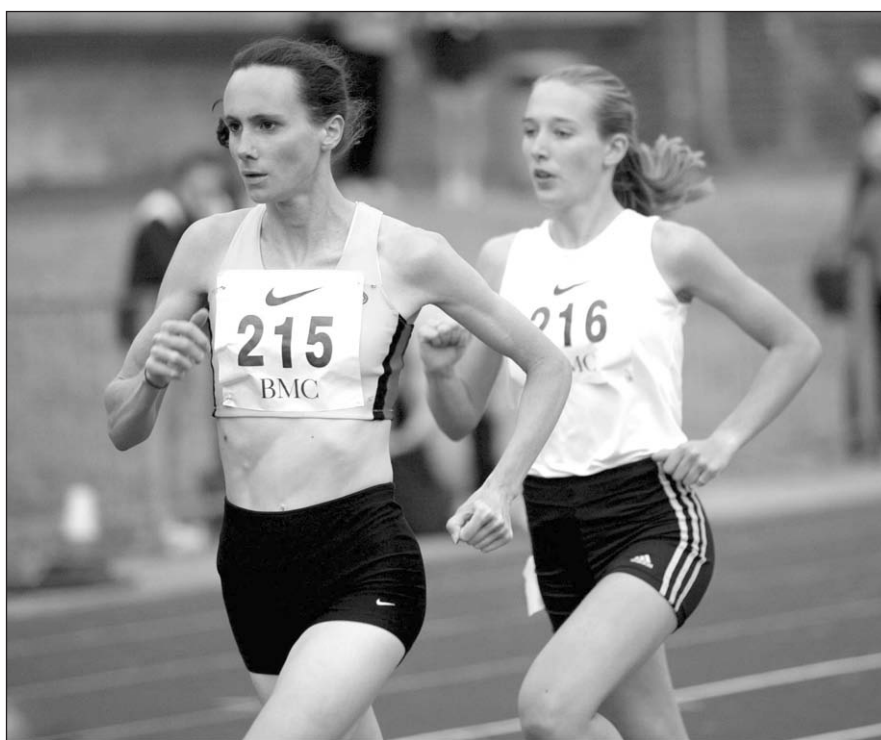
Watford, 5.7.03. MATT SHONE wins the 1500m. photo by Mark Shearman.



Wythenshawe, 31.5.03. GARETH TURNBULL wins the 1500m. photo by Mark Shearman.



Solihull, 6.8.03. ANDY BADDELEY (196) leads from ROB WATKINSON (187) and LEE MERRIEN (189) in the 'B' 1500m. photo by Mark Shearman.



Watford, 5.7.03. HELENA TOBIN (215) leads from ELLIE CHILDS (216). photo by Mark Shearman.







Paris, 7.03. HAYLEY TULLETT (410) leads from JO PAVEY and JOLANDA CEPLAK (Slovenia). photo by Mark Shearman.



Watford, 5.7.03. RICKY SOOS (100) wins the 800m. from GARY REED (Canada, 101). photo by Mark Shearman.

Before Chris Brasher (founder of Sweatshop) won the 1956 Olympic 3000m Steeplechase final, T. J. Law, his shoe maker, said "if I make these spikes any lighter they'll only last a handful of races". Chris replied "fine, make them lighter I only want them to last one".

Like Chris's Gold Medal winning spikes, the Nike Mayfly is not designed to pound out the miles, it weighs 135g and lasts 100k, but that's the quickest 100k you're likely to run.

£25.00 a pair, only available in Sweatshop. Call 020 8758 0044 to order yours before the whole world gets in on the act.

S|W|E|A|T|S|H|O|P

[www.sweatshop.co.uk](http://www.sweatshop.co.uk)



A short life...  
but, a very fast existence!