Vol 8 No 2 Editor: Andrew Huxtable Summer 1970

#### EDITORIAL

This issue should fill in a few minutes round about midnight on June 18. If you think it could have been fatter, it could - if you had sent a contribution. Please note that the next issue will be mailed in October, so please let me have any material for inclusion by September 30.

Nothing will be said here about the continued non-appearance of the annual (it will covered more fully in the Annual Report) except that copies should be available next week.

A circular letter will be sent next month covering the AGM, members' pentathlon and dinner.

If some of you found page 5 of the last issue unreadable and particular-ly want a better copy please let me know.

#### MISCELLANY

- :: Congratulations to Peter Matthews on being selected as one of the three announcers for the Commonwealth Games.
- :: Last chance!! Half price offer! Edinburgh Geographia Sectional Map 2/- (post free) from Andrew Huxtable, 78 Toynbee Road, LONDON SW 20.
- :: IAC Meeting (Crystal Palace, September 5): would any member interested in operating a scoreboard please contact John Herring, 6 Overhill Way, BECKENHAM, Kent BR3 2SW.
- :: We included in the previous issue proposals by Keith Morbey for a "Hall of Fame". Only one member (Colin Young) bothered to send comments. Dig out your copy now, read the article again, and write to Keith.
- :: Of the five members who appear in the "Directory of British Scientists" (1966/67 edition), two (Mike Hayes and Chris Thorne) appear in the recently published "Who's Who of British Scientists" (1969/70 edition). Their main professional interests are shown as, respectively, "studies on the chemistry of soil organic matter and on the interaction of organic chemicals with soil organic matter fractions" and "enzymology". Mike writes: "I lecture in organic chemistry and have been tutor within this Department to such chemists and athletes as Rodney Morrod and Peter Aston. At this time I tutor Peter Cornes. I lead our Department's research team which is involved in studies relating to various aspects of soil organic matter. Our best contributions, which have already been published in various scientific journals, have (dare I sayit?) advanced our understanding of the chemistry of soil polysaccharides (giant sugars) which are responsible for binding soil particles into the crumb-like structure with which we are all familiar. Equally well advanced are our studies on the chemistry of interaction of organic chemicals (weed killers, pesticides, etc) with soil organic matter and with clays. These studies have caused us to enter into the field of humic acid chemistry. (Humic acid is the material whose presence causes some soils often to be darker than others. It is very important for the fertility of soil and is the "greatest devil" where binding of organic chemicals is concerned.)

I've recently completed three chapters for three different books, and these are in print. Also, unfortunately, I am very far behind in the publication of research. I hope, when I get the present lot finished, that these - for myself and colleagues - will number about 35." Chris writes: "My work remains centred on investigating the structure and function of dehydrogenase enzymes. It has become apparent that living organisms often possess several versions of the same enzyme (these are the so-called iso-enzymes). In some cases different genes

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control the different iso-enzymes, and so each has an independent origin; but in other cases an enzyme may be modified to give rise to a different version. Malic dehydrogenase shows both types of iso-enzymes (genetic and modified), and I am trying to discover the relationships and functions of these multiple forms. It seems that the M-Malic dehydrogenase family is concerned with Krebs cycle function, while the S-Malic dehydrogenase group may be concerned with indirect action in lipogenesis (laying down fat). In addition, I have a research group looking at some aspects of mitochondrial metabolism. Mitochondria are responsible for the synthesis of most of the adenosine triphosphate (ATP) used by encaryotic cells, and we are presently concentrating on mitochondria obtained from the brains of decapitated rats. Brain mitochondria have some special peculiarities, particularly their response to various salts, and we are hoping to find the biochemical

#### BOOKS RECEIVED

British Commonwealth Statistics (1970 edition) Compiled by Stan Greenberg International Marathon Statistics (1970 edition) 12. 6 post free Compiled by Roger Gynn Guide to British Track and Field Literature 1275-1968 5. 6 post free Compiled by Peter Lovesey and Tom McNab All the above may be obtained from: £1 7. 6 post free Arena Publications Ltd, 325c Streatham High Road, LONDON SW 16 Scottish Athletics 1970 Compiled by SATS, ed. Ian Steedman 5. 6 post free Available from: Ian Steedman, 2 James Street, EDINBURGH EH15 2DS WTFW Yearbook 1970 Compiled by SHIWA, ed. Pete Pozzoli £1 12.6 post free Available from: Pete Pozzoli, 155 Ordnance Road, Enfield Lock, ENFIELD, Middx

# EUROPEAN JUNIOR CHAMPIONSHIPS 1970 by Peter Martin

Based on the 1969 lists of girls born in 1952 or later here are some hypothetical entries and finalists.

UK entrants: Golden 11.6w, Ramsden 11.7w, Stroud or Lannaman 11.9 100m UK placings: 2, 8 <u>200m</u>

UK entrants: Golden 23.8w, Neufville 24.3, Stroud 24.6 UK placings: 1, 7 400m

UK entrants: Neufville 54.2, Livingston 55.7, Stroud 56.4 UK placings: 1, 6

UK entrants: Sonner 2:12.4, Sutherland 2:14.3, Marquis 2:14.9 <u>8</u>00m

UK placings: 1500m: UK entrants: Lovell 4:38.1, P Yeoman 4:42.1, Chun 4:48.0

UK placings: 5, 6
100mH UK entrants; B. Corbett 14.2w, Walls 14.5, Turpin 14.6 UK placings: 8

UK entrants: Walls 1.73, Wetherall, Morrison or Hirst 1.60 UK placings: 4 HJ

UK entrants: Walls 6.36, Biggs 5.82, Murray 5.81 LJ

UK placings: 1 UK entrants: Kerr 12.71, Blackwood 12.35, Byng 11.72 <u>SP</u> UK placings: -

UK entrants: Blackwood 42.16, Kerr 40.00, Carter 39.56  $\underline{\mathrm{DT}}$ UK placings: 8

UK entrants: S Corbett 41.22, Johnson 39.20, Pendlebury 38.76 JTUK placings: -

UK entrants: Walls 4591, B Corbett 4222, Byng 4222 <u>Pen</u> UK placings: 2 400mR UK placing: 3

400mR UK placing: 3 (?) 1600mRUK placing: 2 (?)

## 11.0 FOR 150y IN 1863? by John Douglas

When recently I was given a copy of the "Journal of the Household Brigade for 1863, I hardly expected it to be a source of athletics statistics. Yet

The "Journal" was the magazine of the various regiments of Guards and continues to this day under another title. In 1863 a number of the Guards regiments were in Canada and the "Journal" gives an account of the "Montreal Fête of the Ladies Benevolent Society" held on the 25th and 26th

In front of a crowd of 3,000, an officer-only race, "a dash of 150 yds", was won by a Captain Fairfax of the Grenadiers in a time of "eleven seconds", beating his opponents by a foot or two. That he was awarded a whip as a prize seems an underestimate of the performance. Fairfax was less successful in a 200 yds hurdles (8 flights at 3 ft 6 in) being beaten by a Private Butt of the Scots who won on the run in by a foot or two. In the "standing hop-step-and-leap" a Private J McKevitt cleared a respectable "32 ft 3 in" to beat two opponents.

Meanwhile, as they say, back in England, officers and men of the Brigade also were active in athletics although AAA Rules seem to have been ignored. "A race of 100 yards for £25 came off at the Ash encampment between Captain Herbert of the Coldstream Guards and a private named Kent of the Scots Fusiliers, the officers of the latter regiment having made the challenge. 't first the Captain's backers were rather doubtful of their favourite, it eing known amongst them that his opponent had frequently appeared in public on similar occasions. As the time of the race approached, when the two rivals came on the ground, the confidence of the Captain's supporters was greatly strengthened by his muscular and well-knit figure, in praise of which too much could scarcely be said, considering that he had not been in training. However when the preliminary canters were taking place, hopes again decidedly fell by the undoubtedly professional appearance, both in figure and in style of running of his opponent who certainly justified the good opinion of his backers. The result was that Kent became a greater favourite than ever before, and was backed at 3 to 2, the betting previously having been even. After six or seven false starts they got away well together, and so remained for about fifty yards, when the Captain came to the front, and won easily by three yards amidst the cheers of the officers and men of his regiment."

Although no time is given for this epic 100 yds, surely the number of false starts must be some sort of record.

Long Walk, Windsor was the venue for a 300 yds race "between two pedestri-30.5 secs. Unfortunately again no time is given for a 100 yds race at Warwick in November 1863. This £100 a-side race was between a Captain Sharpe and a Mr Chadwick, the latter being 3 to 1 favourite. Chadwick justified the betting: "They jumped off together but Mr Chadwick quickly took up the running and without ever having been extended won by four yards. Afterwards Captain Sharpe undertook to walk six miles in the hour, a mile in and out, for a bet of £75 to £25, which feat he easily accomplished in

If you are inclined to classify the times and distances as doubtful, please

IMPORTANT! A red sticker affixed to the foot of this page means that you have still not paid your 1970 subscription and until you do so will not receive a copy of BRITISH ATHLETICS 1970, YA BOYS AND GIRLS YEARBOOKS or any UK Ranking Lists, etc. See also Rule 3(d) of Constitution.

Metrication in British athletics has been gaining momentum rapidly over the past year, and in many spheres a complete change-over has already been achieved (e.g. the Schools, the Women, etc.). The general public, and of course the Press, still need a considerable period of adjustment, while even the bulk of N.U.T.S. membership have been taken by surprise and find it difficult to think completely metric. I am therefore presenting this paper on the subject, in the hope that forthcoming tables, thereby establishing a uniform approach to the problem. At comments and suggestions; in particular, David Dallman for his many invaluable difficulty of trying to convert between systems whose units are in ratio greater Unfortunately, the problem of convertinetre).

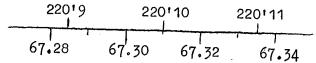
Unfortunately, the problem of conversions will remain a millstone around our necks for some time to come. On the track, our historical records for the traditional yards/miles events will have to be converted to their metric equivalents, so that All-Time lists will have some meaning over the next decade or two. Work is well in hand on this aspect, and 1 mile/1500m, 3 miles/5000m and 6 miles/10000m tables will be published before the end of the year. Naturally these tables will be relatively easy to assimilate, since we have long been accustomed to making crude adjustments (the 18/28/60 sec. factors), and there is virtually no reconditioning required for the shorter distances.

With field-events, however, the problem is more difficult, because the elements of similarity which exist between associated track events are missing; it takes time and effort to learn to equate Imperial and metric measurements beyond very rough approximations or a few handy round figures. As a result, exact conversion values between the systems, hitherto the concern of a few NUTS, are now required by everyone. Initially these conversions must be available in both directions, since results quoted only in metric will have to be translated into English for some time yet before people begin to appreciate their value unaided; eventually we will need only the Imperial to metric tables, to cater for any remaining backward countries like the U.S.A., and to deal with our own historical data.

All this is probably obvious, and I must now progress to a detailed explanation of my theories and methods. The first requirement is to go back to "square 1" and examine what we mean by the term "conversion", and immediately we meet a widelyheld misconception. The usual approach is to make an exact as possible calculation upon the given measurement, and then round-off the result to some acceptable unit; e.g. 16.00m is 52'5.921..., which might be quoted as  $52'5\frac{5}{4}$ , 52'5%, 52'5.9, 52'5.92 or 52'6 depending on one's individual persuasion. most frequently accepted method is to round to the nearest unit, but this does not necessarily give the most satisfactory result, particularly with the vertical jumps, as I shall presently show. Let us now consider the basic question: "What does a measurement in athletics really mean?"; the answer is "A mark registered in the landing area has been measured from a fixed point and found to be a certain distance from that point." This "certain distance" will be the lower of two limits between which the true value lies, these limits being adjacent units according to the existing rules for measurement. a measurement of 16.00m would imply a true value lying anywhere in the range "at least 16.00 but less than 16.01"; the following sketch of this situation shows how the actual value in practice might lie below 52'6 or above 52'64, which explains apparently conflicting results obtained when measurements are made in both metric

52'15 | 16.00 | 16.02 | 52'17

Using probability methods, one can show that the chances of a 16.00m jump being respectively  $52^{1}5^{3}4$ ,  $52^{1}6$  and  $52^{1}6^{1}4$  are approx. 21%, 64% and 15%; this means that in any random selection of 100 jumps recorded as 16.00m, about 21 are expected to lie below  $52^{1}6$ , 15 above  $52^{1}6^{1}4$ , but the majority would have an expected value of  $52^{1}6$ . I must mention here the difficulties of trying to convert between two systems the ratio of whose units is more than 2 to 1, because one will frequently encounter cases where two different results are equally likely; e.g. there is an equal chance that 220'10 is 67.31 or 67.32 if one converts to unit centimetres, but converting to even centimetre units, there is a greater chance that 220'10 is 67.32 than 67.30, as shown in the sketch on the next page:



The A.T.F.S. tables were based upon the ½"/1cm system for the long throws, which is one reason why I find them unusable for performances measured under the current rules. An acceptable conversion table must translate from one system directly to the other in standard units (i.e. without the necessity of further adjustments or rounding-off), and this principle is the basis of my definition of a valid conversion: an estimate of what a performance which has been necoured in one system of measurements would have been, had it been measured in the other system. I use the term "estimate" to emphasize that frequently we cannot guarantee the absolute accuracy of a conversion; all we can do is try to minimise the chances of error where there is a choice of possible values. There are, of course, many cases where there is no choice, when translating from Imperial to metric under ½"/1cm rules or from metric to Imperial under 2cm/1" rules; e.g. a high jump of 6'0½" cannot be other than 1.84m, a throw of 62.84m must be 206'2", but 6'0½" may be either 1.84m or 1.85m and 62.86m may be either 206'2" or 206'3", etc. In the reverse direction (i.e. where the unit "from" is greater than the unit "to") there is always a choice; e.g. 206'2" embraces a range from just below 62.84m to

The concept that a given measurement implies that a mark has been registered which lies anywhere between two consecutive limits is valid for the horizontal jumps and throws, but is not necessarily applicable to the vertical jumps. In these the bar will normally be set at pre-determined heights such that one cannot assume a random distribution of locations between the two limits. On the other hand, allowance must be made for variations in settings, even when the bar is accurately checked by tape-measure; it would be clearly ridiculous to assume that the bar will always be placed exactly at a given figure - in practice, most methods of measurement are relatively crude for the degree of accuracy implied, and moreover there is a natural tendency to permit a setting fractionally above the stated It is perhaps appropriate at this point to refer back to my definition of a conversion in the preceding paragraph, and to reassert that it is wrong to translate the measurement into the other system and then round off to the nearest unit. Take, as an example, a high jump of 5'6"; the actual measurement converts to 1.6764, so should this be 1.67 or 1.68? The metric value is, of course, nearer 1.68 than 1.67, but the answer to the question depends upon the likelihood of the bar being placed sufficiently above 5'6" to be actually 1.68m Occasionally this will happen, but usually 5'6 will prove to be below 1.68, so the "best estimate" or conversion value must be 1.67m. people beg the question by taking conversions to half the basic unit (e.g. .005mor 8" in the high jump), but this is not an adequate solution, for it implies a degree of accuracy which simply does not exist. It is as well to realise that the accuracy of a measurement depends upon the method used to obtain it rather than the number of decimal places in the result; although we can graduate our tape-measures as finely as we like, it will be many years before we can perfect a take-off area with variations in level as small as one-eighth of an inch! Furthermore, athletics statisticians should appreciate that the basic units of measurement must remain constant throughout a list, otherwise the elements of the list will cease to have any true comparative value.

I fully realise that many readers will find my argument strange, but I hope not unacceptable. The use of estimates is a highly subjective business, and opinions will obviously vary, but decisions have to be reached; after all, statisticians have long been happy to use estimates in converting track times, even though the factors are sometimes rather crude. It is not illogical to argue that conversions should always be rounded down, but I think that few people would be really happy with this - for instance, 2.00m (6'6.740+) would become 6'6½. My own tables are obviously not infallible, but are constructed with the aim of being less likely to error than tables based on different methods. At this point, I must mention there have been many variations in the rules for measurement (quite recently in Britain, the jumps and shot had to be recorded to ½" units), and my tables should be used only for performances measured under the current regulations. I am compiling separately sets of basic tables for use on "non-standard" measurements, but these will be for limited circulation, mainly to statisticians dealing with historical data.

Finally, there remains the problem of presentation in ranking lists. How should we deal with situations in which conversions from metric to Imperial and vice-versa produce apparently conflicting results? In discussing the high jump above, I suggested that 5'6" should be converted to 1.67m; on the other hand, 1.67m converts to 5'5\frac{3}{4}". This is the sort of paradox which arises no matter what method of conversion is used, and it occurs also when measurements are taken in both systems (e.g. the current UK discus record, 57.78/189'6 by Watts and 57.76/189'6 by Tancred). It is perhaps not particularly important when only one person is concerned in any one situation, but it is significant if several athletes are involved at the same level. Using the high jump again as an example, the question is - should we list intermingled in (say) date order? Thus:-

(1.67) 5'6 White 31/5 (1.67) 5'6 Black 18/6 1.67 (5'5 $\frac{3}{4}$ ) Black 2/4 (	(B) 1.67 (5'5\frac{3}{4}) Black 2/4 (1.67) 5'6 Brown 3/5 1.67 (5'5\frac{5}{6}) Green 18/5 (1.67) 5'6 White 31/5 (1.67) 5'6 Black 18/6
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Prior to 1969, performances in our Annuals were listed in English only, and hence this sort of paradox, although it existed, was hidden; we simply took the natural order of feet and inches, irrespective of any disparity in the metric equivalents. Looking ahead, in the not too distant future (I hope) we will be showing metric marks only, and such trivialities as conflicting fractions of an inch will no longer trouble us. As we are now basing the ranking order of our lists on metric measurements, and providing marks in English only as a temporary and tedious irrespective of conversion differences (i.e. example B above). I realise that the average reader will not like this, but it could prove useful in drawing his attention away from the Imperial column to the metric. I also consider that until we list in metric only, we must show which figure is converted, by use of brackets in the traditional way.

My final point concerns terminology. Do not use "linear" to describe "English" or "Imperial" measurements, as opposed to "metric"; "linear" simply relates to distance or direction in a straight line and is a term independent of any scale or system of units, so that 29'2½" and 8.90 metres are both linear measurements. "Imperial" is the term normally used to cover the English system of weights and measures, and is quite appropriate in the context of athletics.

#### NUTS RECORDS

20kmW 1:36:18 Colin Young

(11) 4 Apr 70 Battersea (1st Wilf Wesch 1:29:02)

### NOTEWORTHY PERFORMANCES

800m 2:17.6 Liz Sissons

(4) 10 May 70 Wimbledon (1st Pat Thurmer-Brown 2:14.7)

### TOP UK BROTHERS & SISTERS

Mary (2:08.8-800m), Anna (2:25.1-800m) & Margaret (2:35.6-800m) SONNER

=2182

With acknowledgments to Dave Cocksedge, Peter Martin & Malcolm Warburton

Graham Gower

David Carrington

14.3w

14.4

Total

11

75

Tela Holihen 3.000 metres Steeplechase Best Number of performances better than 8:45.0 8:50.0 8:55.0 Ave. 8:40.0 8:55.0 best 10 Gerry Stevens 8:30.8 4 22 83 15 8:39.8 Maurice Herriott 8:32.4 17 4Ò 6ĺ 8:34.3 John Jackson 8:33.0 6 11 14 8:39.0 8:42.4 19 Gareth Bryan-Jones 8:36.2 2 6 9275564635417541115333311 12 Ernie Pomfret 8:37.0 3 10 36 8:41.2 8:40.0 Andy Holden 3435321831 2 8:51.9 Bill Mullett 8:40.8 2 8:54.4 Chris Brasher 8:41.2 1 8:55.4 Alistair Blamire 8:41.4 2 Tony Ashton 8:41.4 8:53.2 8:53.0 8:58.4 2 John Linaker 8:41.6 1 Paul Lightfoot 8:43.8 1 John Disley 8:44.2 8:47.8 Lachie Stewart 8:44.8 1 8:57.9 Dave Chapman
Eric Shirley
Bill Ewing 8:46.4 8:51.8 8:47.6 8:52.4 8:53.8 8:55.0 2 8:47.8 Chris Perry 8:49.2 1 Navid Gibson 8:49.4 1 9:07.5 ≱an Hall 8:49.8 1 Brian Lee 8:49.8 8:58.3 8:53.6 8:55.7 9:01.1 1 John Bicourt 8:50.2 Mike Palmer 8:50.4 Tim Johnston 8:50.4 Ron McAndrew 8:50.6 9:01.7 8:56.5 9:02.6 John May 8:51.4 Peter Braithwaite 8:52.6 Dai Davies 8:54.6 9:02. Geoff Pymm 8:54.6 9:04.5 John Offord 8:54.6 1 9:07.4 Total 32 88 178 <u>301</u> 120 yards/110 metres Hurdles Number of performances at or better Best Ave than 13.8 14.1 14.4 45 best 10 David Hemery 13.6 6 5 27 27 7 6 13.79 13.82 √ n Pascoe 13.7 57 65 63 Mike Parker 13.9 14.11 Lawrie Taitt 14.0w Bob Birrell 14.13 14.0w 1 19 8 26 14.25 Mike Hogan 14.1 ī 14.36 Stuart Štorey 14.1 5 1 Don Finlay 14.18 14.1w 11 14.32 Rodney Morrod 14.2 8623251841 14.36 Andy Todd 14.2 Peter Hildreth 14.42 14.2w 14.31 Rupert Legge 14.2w 14.56 Tony Hogarth 14.2w Desmond Price 14.47 14.2w Jack Parker 14.59 14.3 14. Vic Matthews 14.3w 14.45

14.52

1

353

## 400 metres Hurdles

	Best	Number of performances at or better Ave	
David Hemery John Sherwood Andy Todd John Cooper Peter Warden Chris Surety Tom Farrell Chris Goudge Robin Woodland Mike Hogan David Schärer Bob Roberts Harry Kane Bob Shaw John Cook Tony Collins John Metcalf Tom Bryan Max Boyes David Cecil Tony Harper Roy Fox David Gracie	49.10.00.33.33.55.77.79.99.22.33 al	5 14 18 21 49.77 3 24 40 50 49.91 1 9 20 30 50.50 5 33 58 50.62 1 12 29 51.18 2 15 51.66 2 15 51.64 3 14 51.91 1 9 52.23 1 14 52.10 7 52.23 3 53.23 1 52.67	7
		9 53 139 327	

## RESEARCH IN PROGRESS AND PROJECTED

		The state of the s
Shaun Adair Dave Cocksedge	- &	UK Track Directory; UK Indoor Track & Field Handbook
Alan Lindop David Dallman	-	Progressive UK junior & youth best performances World all-time best performances on relay legs (men & women)
Roger Gynn	-	Field event series: Marathon year lists from 1904
Andrew Huxtable	_	Best brothers & sisters (world & IV). B
Peter Martin	-	WAAA junior & intermediate championship results before
Peter Matthews	-	intermediates); Junior age groups (events, weights of impedimenta, etc.) in countries other than UK Best 10 marks averages by individuals (world & UK); Best marks in individual events by decathletes and
Keith Morbey	-	UK Top 10 year lists (1919-49); World, European and Commonwealth relay lists (men & women); UK relay lists (all age groups, men & women): Champiagaki.
Pete Pozzoli	-	UK all-time best performers ago magnifications
Bob Sparks Dave Terry &	-	records by birth (women) Growth curve analysis
Peter Lovesey Chris Thorne	-	UK Top 10 year lists (1866-1918) World best performers by age (men & women under 20); World all-time indoor best performers (men & women); World all-time best performers at non-standard events (men)