

# NEWSLETTER

No. 130

March 1972

## REMINISCENCES OF SINGAPORE IN THE EARLY FIFTIES

'We've heard all about your sporting activities and have included you in the team for Saturday' remarked the cricket captain on my first evening at the Braddell Hill Hostel. My protests about not having played since leaving school ten years ago were answered by 'We'll put you in last'. The match was against the Army at Seletar, in perfect weather for the well-seasoned but a trifle too hot for me. Ten runs required for victory and my turn - the classic situation which I had met once before in my first school match - and somehow I succeeded in keeping out the straight ones to the delight of our captain who hit the winning run. From then on, it was cricket every weekend, sometimes Saturday afternoon and Sunday, mostly against Services teams on the island. However, it became too much of a tie and I decided to concentrate on tennis at the University of Malaya where we had a multi-racial team of quite high standard. Our club captain, a Filipino in his fifties and an excellent player, invited club members to his house for a party. Things seemed rather quiet, so to liven up the proceedings he produced a flute and played the slow movement of the Mozart flute concerto with his wife accompanying on the piano.

Nolan Daly was my colleague for the first year and the owner of an ancient and temperamental Triumph motor bike. We had just missed the Hostel bus to Raffles Square, the main European shopping centre. 'I'll take you on the pillion' said Nolan 'but first we must get the so-and-so started'. No joy after the tenth kick, so out came his motley collection of used plugs which he kept wrapped up in an oily rag. At the seventh replacement, the machine started and it was now a case of hopping on quickly before it had a chance to stop. We roared down the Thomson Road and were almost in sight of our goal when Nolan just failed to miss a Chinese cyclist with one of those enormous wicker baskets on the carrier. Miraculously, nobody was hurt but the bicycle back wheel was decidedly buckled.

/We

We were quickly surrounded by vociferous Chinese who were obviously demanding recompense. Nolan very sensibly hailed an Indian bystander who, after much discussion, decided twenty dollars (£2.50) would suffice. We paid up only to be told later that the repair would have cost a dollar in a back street. Our Chinese friend had earned a week's wages for having had his wheel buckled!

Another incident involving Nolan took place at the University. Our equipment hut was on the edge of a swamp some three hundred yards from our ancient office in the old Physics building. I used to call in our hut to check the ionosonde on my way home and on this occasion, Nolan was making absorption measurements in semi-darkness. On opening the door, I noticed something unusual under his stool. 'It's a .... snake' he yelled as he gently eased his feet out of striking distance. But the snake, more scared than Nolan, slithered away behind our crates of spares, under the bench. For fully half-an-hour we searched those crates but found only a snake skin, but a prod with a stick, behind the corner desk leg, made our friend come out of hiding only to have his head chopped off with a spade wielded by yours truly. Cruel you might think, but a few weeks later a six foot cobra was run over by a car on the road within twenty yards of the hut. It was believed to be wounded but was never found despite a massive search by the University labourers. Our specimen incidentally, was about a foot long, pencil thick and comparatively harmless.

After I had spent seven months in the bachelor's block at Braddell Hill, the powers-that-be decided that conditions on the island had improved sufficiently to allow wives to come out. My wife arrived and we took up residence in a bed-sitter at a boarding-house owned by an elderly Australian widow who had lived in Singapore for almost thirty years. We all called her Murf and on one occasion I commented on how nice the mushrooms were. 'They're not mushrooms dear, they're cham-pig-nons' was the gleeful reply in that broad Australian accent. Despite her being almost a native, she had never bothered to master the language and would give orders to her cook such as 'How about ini cookie' (ini meaning this). A couple recently returned from their honeymoon, moved into the room adjoining ours. One night the German wife woke her husband with a start 'Charlie there's a dog in the toilet' (the toilet had two doors, one outside). Next morning over breakfast we were joking about this when I asked how she knew it was a dog. She then gave us a vivid vocal description of a thirsty dog having a good guzzle from the pan!

A year later, we were offered a warden's house in the University Student's Hostel. Despite the noise - we were along one side of a square of buildings - we spent a most enjoyable year and made good friends of many of the older students

(Chinese, Indian and Malay). Our house was looked after by an extremely efficient and likeable Malay woman called Jami, who invited us to her daughter's wedding - a very colourful and noisy affair set in a Malay kampong (compound). On our last day at the house, she insisted on providing dinner for us, roast chicken with all the trimmings and a Malay sweet. Alas, the chicken, which looked so appetising, was as tough as old boots and it was quite a problem to clear our plates. However, I said how much we had enjoyed it and her reply, based no doubt on the long time taken over our first course was 'Sikit tua, tuan, sikit tua' which freely translated means 'Little old, master, little old'. Old it certainly was, a cockerel that had served its time in the local kampong!

Next day we left for home in a very noisy piston-engined Argonaut aircraft. We had been in Singapore for almost three years and had mixed feelings about leaving the Island. The heat and humidity had taken their toll - no air-conditioned bedrooms in those days - but even so we had managed to enjoy the experience to the full.

R. W. Smith

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FIRST AID NOTICE

Staff are reminded of the location of

FIRST AID EQUIPMENT

RESUSCITATORS

First Aid Room (Minuteman apparatus) - A Spur  
A Spur Cupboard near fire alarm  
C Spur " " " "  
E Spur " " " "  
Metal Workshop  
Carpenters' Shop  
Old Building

FIRST AID BOXES

At End of Each Spur  
Workshop  
Stores  
Computer Room  
Old Building  
Hut 3

The next issue will include a more general article on the organisation and activities of the Safety Committee.

MAGIC SQUARES

By my articles on Magic Squares in the past two editions of the Newsletter I hoped to stimulate interest, and to learn something myself. I have certainly succeeded in both objectives (and have been prompted to do a little reading about it myself!).

Bob Walls and Albin Zavody told me about a general solution for any odd order square. I find that it is attributable to De la Loubère, and closely similar to one by Bachet de Meziriac (1613). Start with '1' at top centre (or in the cell directly over the centre of the square (Bachet)), and proceed diagonally upwards. Overflows are treated as though the square is wrapped round a horizontal or vertical cylinder as the case may be. When the diagonal is full, step one down (or two up (Bachet)). Thus for the 5th order we get:

17	24	1	8	15
23	5	7	14	16
4	6	13	20	22
10	12	19	21	3
11	18	25	2	9

De la Loubère

and

23	6	19	2	15
10	18	1	14	22
17	5	13	21	9
4	12	25	8	16
11	24	7	20	3

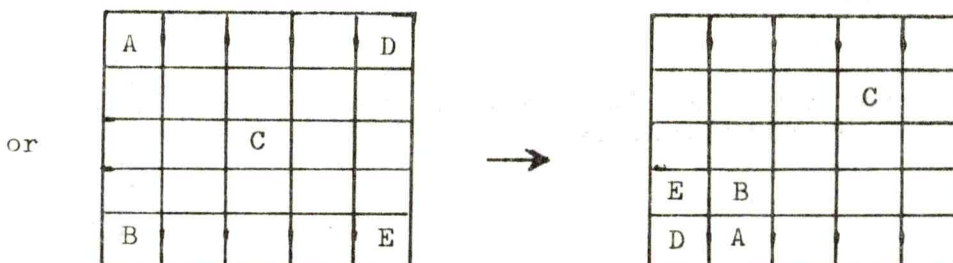
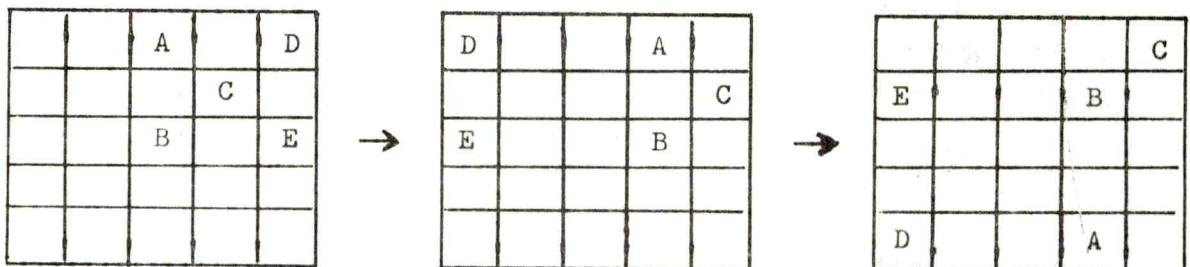
Bachet

, but

23	6	19	2	15
4	12	25	8	16
10	18	1	14	22
11	24	7	20	3
17	5	13	21	9

"Pan-magic Square"

is much more interesting. Henry Rishbeth gave me the details. It is formed using knights' moves (all Nor Nor East) stepping one down when blocked. It is a "Super Magic Square", or "Pan Magic" in my book. Not only do rows, columns and major diagonals sum to 65, but also all broken diagonals, and all groups of 5 based on St. George's or St. Andrew's cross shapes, large or small, with overflows. The number of combinations is impressive, and the "cross" shapes get transformed out of all recognition by some overflow combinations. Thus the following examples all sum to 65:



Clearly the square retains its "pan magic" properties under all transformations by "rotation" in vertical or horizontal senses.

My (tentative) contention that one can't make a 4 x 4 magic square was refuted by Rodney Knight and by John Feather (honorary Quest puzzle tester) who each presented a number of 4 x 4's, and to add interest to the refutation at least one of them is pan magic! Not cross shapes of course, but all blocks of four, and all broken diagonals sum to 34 e.g.:

1	12	7	14
8	13	2	11
10	3	16	5
15	6	9	4

John Feather also found a type of modification to my 9 x 9 square which does not destroy symmetry, and trebles the number of rearrangements. He also managed to replace 41 at the centre with 45, rearranging the square to keep it magic. However this destroys symmetry and is not open to such an astronomical number of permutations. Nevertheless new families of possibilities are being produced, including Bachet and De la Loubère, so I must bow to the comment in the book that no-one has been able to prove the maximum number of arrangements! However I think I have got to within an order of magnitude.

Parting shot: I read that "multi-magic" squares exist, which remain magic after all the elements have been squared ... or cubed! Good hunting.

P. H. G. Dickinson

STAFF NEWS

Congratulations to:

- Ann and Mick Reid on the birth of their daughter, Emma, on 13 March
- Mr. & Mrs. A. Peake on the birth of their daughter, Bernadette Christina, on 31 January in the Falkland Islands
- Mr. & Mrs. G. R. Kennedy on the birth of their daughter, Georgia Fayanne, on 18 February at Chilbolton
- Phil. Bannister on his engagement to Carol Russell of Orpington, Kent
- Dr. Lance Thomas on being awarded a D.Sc. by the University of Wales
- Ian Greenan, now M.I.E.E.
- Mrs. J. C. Palfreyman, now Shorthand/Typist I

Welcome to:

B. C. Stewart	H.S.O.	
G. W. Eastwood	P.S.O.	)
E. W. V. Acton	P.S.O.	)
J. E. Foster	P.S.O.	)
P. A. Vaughan	S.S.O.	)
C. P. Whitlock	S.S.O.	)
C. C. Bray	H.S.O.	)
R. K. Burdett	H.S.O.	)
J. F. Smith	Eng. I	)
J. W. Reed	Eng. II	)
Mrs. I. Harris	Typist II	P/T

Transferred from London Office  
(S.R.M.U.)

Resignations

R. A. J. Savage      Craftsman I C/H      Retired

Other Changes

G. Douglas              H.S.O. (Acting) returned to duty at RSRS from  
Falklands

News of Former Staff

We offer congratulations to our former Director, Mr. J. A. Ratcliffe on his being elected to Honorary Fellowship of the Institute of Physics.

Congratulations also to Vince Foley on his engagement to Elizabeth Harris of London Office.

STATION NEWS

Messrs. Gibson and Sandford demonstrated the Station exhibit, 'Resonance Scattering from a Tuned Laser Beam' at the Physics Exhibition which was held from 13-17 March.

The Director, Dr. Lane, Dr. Bramley and Dr. Davies will be going to Geneva for Interim Meetings of some of the Study Groups of the International Radio Consultative Committee (CCIR), to be held from 5-18 April. Director is International Chairman of Study Group 5 (Propagation in Non-Ionized Media), Dr. Lane and Dr. Davies will participate in the work of this Group, while Dr. Bramley will take part in the work of Study Group 6 (Ionospheric Propagation).

SPORTS AND SOCIAL CLUB NEWS

Jack Savage and the Sports and Social Club

Jack Savage, as most of you will know, retired from service with the Station on 18 February. It was decided by the Committee to make Jack an Honorary Life Member of the Sports Club as soon as his impending retirement was made known. This decision has, I feel sure, met with the approval of every member of the Club, in recognition of all the tireless work Jack has put in for us for virtually all of the time of existence of a Club here at Ditton Park.

To mark the occasion it was my pleasant duty, not to say good-bye to him, but to present him with an engraved pewter tankard, at a ceremony held in the bar when Club members had been invited for drinks by Jack on Thursday, 17 February. I thanked him for all the effort he has always put in on our behalf, not only for this present committee, but for all committees which have gone before. I wished him well in his retirement and hoped that he would be able to join us occasionally for a drink in the bar or attend any of our functions for many years to come.

On Saturday night, 18 March, a St. Patrick's Night Dance was held in the Clubroom. There was no particular Irish flavour about the evening [unless of course you were drinking Guinness!] but was so-called because of the proximity of the dates. Although not overwhelmingly attended unfortunately, due to a late date-change, affording a lot of people with baby-sitters little notice, the evening was quite successful. Dancing was to Les Scammell and his ensemble, whose faces have now become familiar at a lot of our functions and the bar had an extension until midnight. Excellent food was also again prepared by lady members of the Committee.

This is my last Newsletter, as Chairman, and I would like to thank everyone who has supported and helped us in our functions and hope that everyone has enjoyed what we have been able to prepare for them.

John Cathrew  
Chairman

NOTICE OF ANNUAL GENERAL MEETING

The A.G.M. will be held on 26 April 1972 in the Canteen at 5.15 p.m. (1715 hr). Tea and biscuits will be provided.

Notice to Members

As you see the end of another year is near, and this year the Sports and Social Club have bought quite a few capital items. These have been bought with our Members' subscriptions, the money that you pay in order that the Sports and Social Activities on the Station are exploited to their fullest extent. It is surprising then that we have had complaints of abuse and misuse of some of this equipment.

May we urge our members not to waste precious capital by destroying equipment as soon as it is bought, and also ask our members to urge anybody using this equipment who has not already joined the Sports and Social Club to do so. Ask them to chip in with their 2p a week to help pay for the facilities that they are using. Application forms for membership are always available from the Secretary, please help us to make our membership as large as possible.

Pat Scammell  
Secretary

P.S. Some of the articles to which Pat refers above are the Table Tennis (re-surfaced this year) and Snooker tables which have been wantonly damaged in the last month or so and also damage to, (and misappropriation of!), bar glassware. These actions have occurred in areas outside the one hundred per cent control of the Sports Club and it is up to all members of the Club to see that they do not happen or bring them to the immediate attention of Committee members so that reparations can be exacted.

John Cathrew

Wine Circle

The A.G.M. will be held on Wednesday, 5 April. Further details will be found on the Notice Board.

A bulk order for further supplies will be placed in the very near future. Interested members should contact me.

Subscriptions for 1972 are now due and it would be appreciated if members could pay these to Mrs. Lena Thomas.

Frank Bennett

Motor Club

It is proposed to purchase a pair of portable drive-on ramps which also have the facility that the horizontal section can be jacked up. These will be a useful supplement to the trolley-jack. This trolley jack will not be available for a short period next month as it requires maintenance and overhaul. Oil orders can be accepted now in advance of the next bulk purchase.

P. Muzlish  
Hon. Sec.

Table-Tennis

RSRS 'A' team made its exit from the Dilger Cup quarter-finals after playing Centre "One", a team well up in the 1st Division. The result, 3-6, is a reflection of the fact that the contest was by no means one sided. In the league the 'A' is doing well. Only two matches have been lost since Christmas. A draw was achieved against Calor Gas 'A' who won the first half match 10-0. A lengthy struggle produced a draw against Burnham F.C., the same result as last time, but Centre Hunters were soundly beaten 7-3.

The 'B' team is still unbeaten although one or two matches have been close.

P. Muzlish  
Hon. Sec.

LETTER TO THE OUTSTATIONS

Dear Colleagues

The Station, now released from its penitential period of compulsory electric fast, is once more a hotbed of activity. Soldering irons solder counters count and warming zephyrs caress the limbs of our chillier members of staff. The landmarks of knowledge continue to be charted.

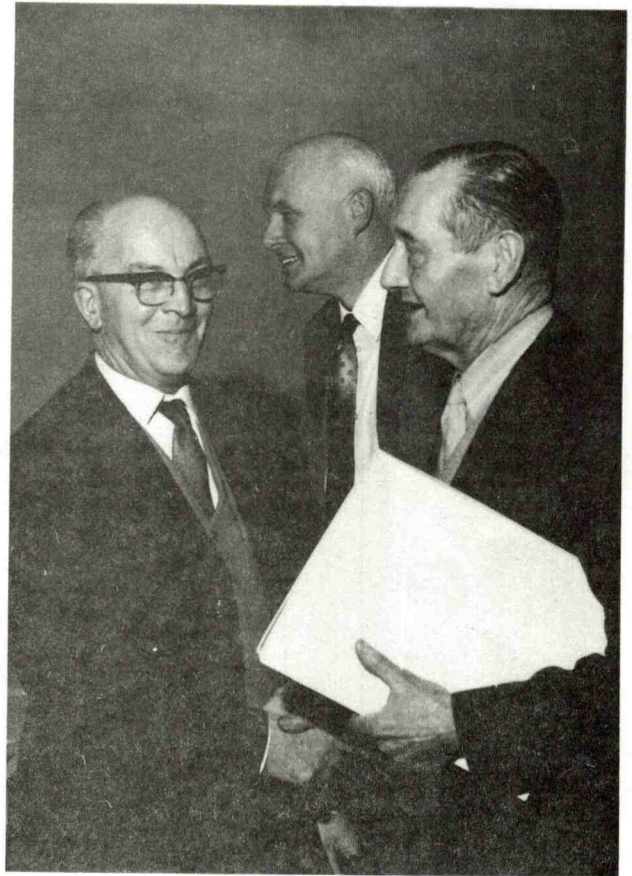
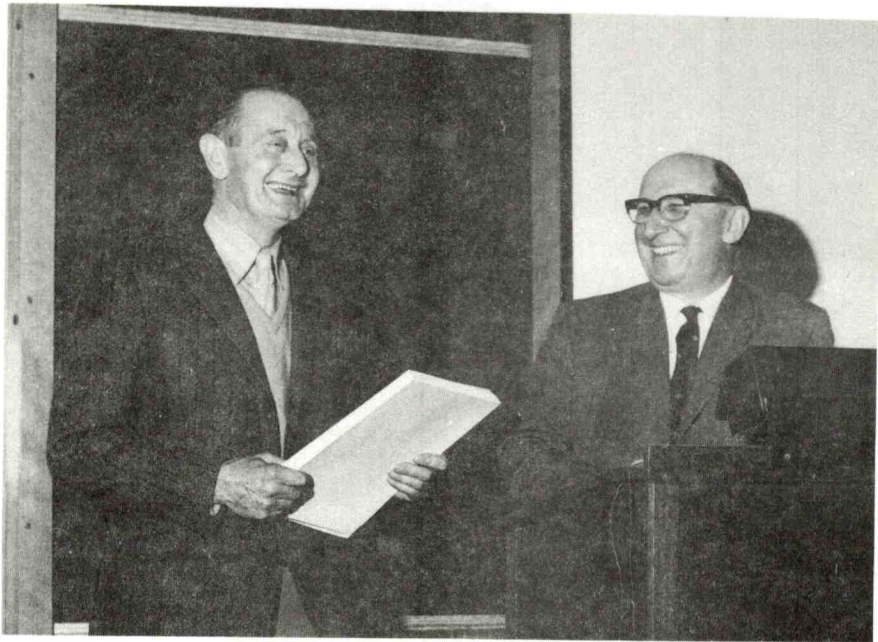
One landmark of which we were particularly conscious was the retirement on 18 February, of Mr. Jack Savage. For forty-two of the fifty or so years of our existence as a research establishment Jack has worked here making his particular and valuable contribution to the progress of radio science. He joined as a carpenter in 1930 with the Radio Research Station (as it then was) under the superintendence of Dr. Watson-Watt (as he then was). Within a few years, the first British radar experiments had been conducted by staff from Ditton Park, and with their success and subsequent incorporation into specialist groups working secretly at Orfordness and later at Bawdsey, Jack found himself involved in matters of national history.

His skills, useful from the start, multiplied with time, and they received official acknowledgement in 1953 when he was awarded the B.E.M. He has become one of those to whom the people cry out for aid in a variety of circumstances and who has the gift of pithy and searching rejoinder to those who, in his opinion, cry out without good cause.

Jack's services at Ditton Park have been much valued and his retirement was marked by a ceremony at which the Director presented us all with a specimen of Savagery, and Jack with a token of our good wishes for a long and happy retirement, personally echoed by,

Yours sincerely

The Editor



Jack Savage, ubiquitous as ever, receives good wishes for his retirement

FEBRUARY 1972

List of Reprints

E. N. Bramley and  
M. I. Pudovkin

Electric Fields and their Effects in the Ionosphere  
Solar Terrestrial Physics 1972, Part IV, 117-141

D. L. Croom

Forecasting the intensity of solar proton events from  
the time characteristics of solar microwave bursts  
Solar Physics 1971, 19, 171-185

D. L. Croom

Solar millimetre bursts and proton events  
Nature Physical Science, 1971, 229, No. 5, 142-143

Internal Memoranda

350

Solar Proton Flares and their Effects in the Vicinity  
of the Earth - D. L. Croom

351

A Statistical Study of Solar Flare Indices and  
Sudden Phase Anomalies over a Short Path  
- E. Hammond