

3p

Harlequin

Leisure Magazine of the United Kingdom Atomic Energy Research Group and Associated Organisations



NOVEMBER 1977



Some members of the ATLAS Rounders Team, which won the 1977 League, before and during practice. In the group photograph, standing left to right: Ken Robinson, Eric Thomas, Julia Spears, Ann Walter, Maureen Goodchild. Sitting, left to right: Harry Richardson, Martin Guest, Mike Claringbold, Brian Totham, Julian Gallop.

In this issue

SHADOW OVER THE SOUTH

OKLAHOMA

ULTRA-LIGHT GYROPLANES

WOMAN'S ROLE

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Harlequin

No. 9(135)
Vol. XXI

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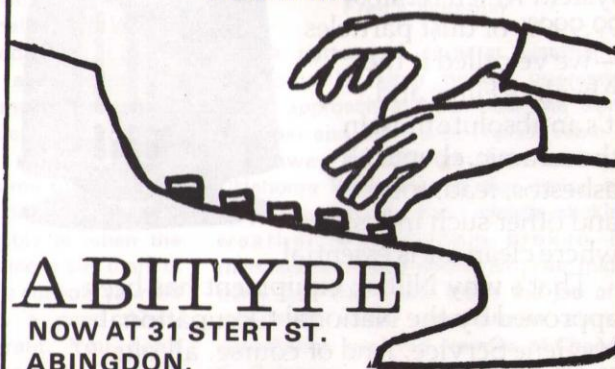
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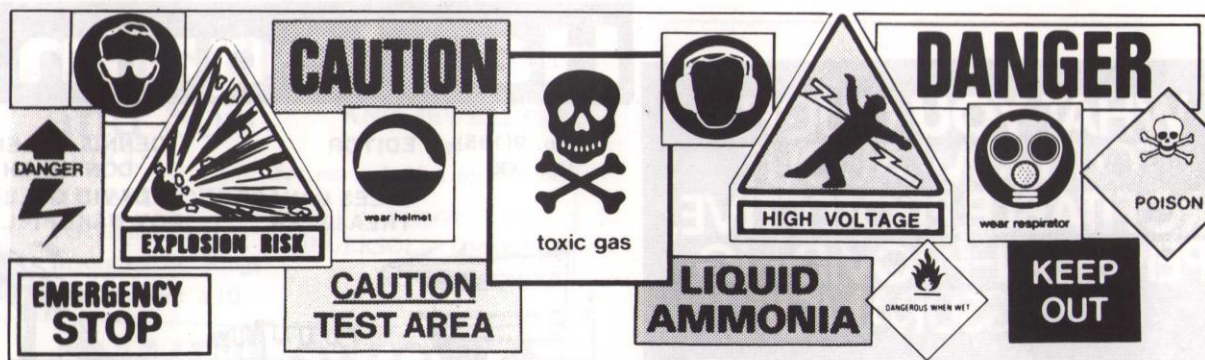
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AT HARWELL EDUCATION &

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Where the Corn is as high as an Elephant's Eye



As you might guess, Oklahoma is the centre point in this account. Why Oklahoma? Of all American destinations reached by the Harwell scientist, it is perhaps one of those least frequently visited. After all, what does it have except vast spaces, the remnants of almost every tribe of Indians in the U.S.A. and, of course, oodles of oil and natural gas? If you search on the map between Tulsa and Oklahoma City, you will find the city of Stillwater, home of the large and beautiful campus of Oklahoma State University: "large" because it teaches more than 20,000 students; "beautiful" because, although founded a mere eighty seven years ago (Oklahoma was only opened for white settlement in 1889), its grounds and architecture are quite tasteful. It has membership of the "Big Eight" Conference of Midwestern universities, thereby claiming to have one of the top college football teams in the country (The Cowboys). OSU also has a lively medium-sized Physics Department, whose success in obtaining NSF and ERDA research contracts allowed me to spend two summer months there as a Visiting Professor. Thus it was that the Hughes family set off this year.

It is very demoralizing to leave home at 4.30 pm on a Monday and still be sitting in Gatwick Airport 24 hours later, when you had expected to be landing in Detroit, the nearest charter flight destination to Stillwater. (Had we been quicker on the draw we might have found seats on a flight to Chicago). Still, even Freddie Laker can't fly without a plane, and the gods that day had decreed that ours was stranded goodness knows where. These things tend to initiate a chain reaction of disasters, but at least Mr. Laker paid for two hotel rooms when we did at last get to Detroit, and after our journey across four states by Greyhound bus, we arrived in Tulsa to be met by my host for the final miles to Stillwater.

We never did see corn as high as an elephant's eye; in fact I doubt if any corn we saw in Oklahoma would have reached an elephant's kneecap. However, the wind did come rushing down the plain, and, when it did, had a temperature of 95°F. This at least made our imagined Oklahoma seem true. I offer a few memories which may be interesting and, perhaps, amusing.

by Tony Hughes,

Materials Development Division



The Great American Rip-Off

I doubt if "rip-off" needs a definition in view of its frequent use in the American-made series which flicker all too often on our TV screens. Suffice it to say that it is usually dollars which are being ripped off the victim. I am about to describe a vicious form of the phenomenon which seems to have escaped notice in the annals of modern crime.

Anyone who has spent high summer in almost any part of the inland U.S.A. knows that it can be hot. And I don't mean what prompts the average Briton, frozen by months of dismal drizzle, to complain "Phew, isn't it hot?" the first time the sun peeps out from the clouds and raises the slumbering thermometer above 60°F. In Oklahoma in July and August, the temperature can soar into the low hundreds. Under such conditions, no resource is more vital than the long drink, cooled to give maximum benefit to the parched and perspiring soul. Indeed, it is so vital that many liquids, which in other situations would be scorned, can be downed in large quantities if accompanied by melting ice. A 12 oz can of fizzy drink costs 20-30 cents, as does a similar-sized cup bought over the counter of a snack bar or cafeteria. "Fair enough", you may say. But ah ha! You didn't notice that before the drink was poured in, the cup already contained the melting ice. We are all used to putting the odd chunk or two of ice in our cool drinks, and accepting a slight dilution of the intended liquor. But a quantity of ice which occupies a goodly fraction of the total volume of the container does seem to me to be a bit of an overkill. When the drink is hurriedly consumed, as it inevitably is when the heat is on, nearly all the ice is still there in the cup. All you can do is console yourself that just-melted ice is a good thirst-quencher and refrigerant. You don't expect to pay for it, however, at such elevated prices!



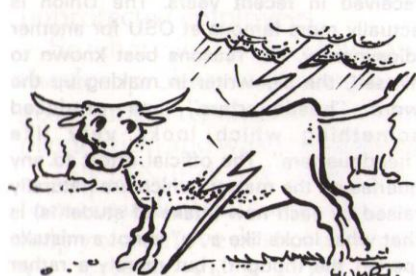
This constitutes the Great American Rip-off. Perhaps a relatively harmless bit of profiteering within the free market economy, but niggling after you've stared at those cups full of a colourless mulch of ice crystals for the umpteenth time. I give the prize for the champion off-rippers to the cafeteria in the OSU Student Union. There one notes that the WIFF coefficient (water and ice filling factor) in the awaiting glasses is exceptionally high, approaching, I calculate, 0.7 in some cases. The only consolation is that the purchaser has the option, if he is brave enough to act under the disbelieving and critical eye of the salesgirl, of pouring out most of the mixture and reducing the WIFF to reasonable proportions.

This dubious honour is a blemish on the performance of an otherwise excellent institution where, amongst other things, I had one of the best haircuts I have received in recent years. The Union is actually more famous at OSU for another idiosyncrasy. For reasons best known to himself, the signwriter in making up the word "headquarters" has produced something which looks very like "headquarters". The official retort to any queries on the matter (which are naturally raised by each new intake of students) is that what looks like a "g" is not a mistake (perish the thought), but merely a rather original and inventive form of "q". In fact, our "inguiy" is "reqared" as distinctly gueer" and "ignorant".

Fred's Weather

The pattern of summer weather in Oklahoma is rather boring. Interesting fronts approaching from both the North (Kansas) and the South (Texas) seem to fade away as soon as they reach the Oklahoma State line, so that during our stay the bright, hot, cicada-clicking weather was seldom broken by thunderstorms and cooler air. You might think that this would make the job of a television news weatherman almost superfluous, but Fred Norman of Channel 5, Oklahoma City, was for us the star performer of the screen. Admittedly, his

competition was not very strong, but I reckon he deserves our wooden Oscar even when judged against absolute standards. Fred's discussion of the day's weather and the next few days' forecast was divided into two parts, split by the dreaded messages from fast talking capitalists trying to sell you a new car or love-seat (in case you don't know, a love-seat is a settee for two - why didn't I know that in our poorer days before we could afford a three-seater?). In Part One, Fred would confine his attentions to Oklahoma. A typical presentation might run: 'Well, folks, today was hot all across Oklahoma. Most places sizzled in the 90's, except Guymon in the Panhandle which shot up to a high of 103 degrees' (Guymon always got the worst of whatever was going). 'Here in Oklahoma City we topped 95 during the afternoon, but now we've got a bit of relief and at the Weather Centre it's down to 85. Tonight we should cool down to 79. Not good sleeping weather I'm afraid, but make the best of it because tomorrow, by golly, we'll be back in the cook-box, and as far as I can see it's going to stay that way!' Part Two gave Fred more scope, as he revelled in the misfortunes of the rest of the country, from inches of rain or tennis ball-sized hail dropping on Kansas to the California desert evaporating at 115°. His best gem must be the description of the results of a thunderstorm in Wyoming, where we had "instant barbecue" as a herd of cattle was struck by lightning, killing (and frying) fifteen head. An equally unpleasant fate



befell some other cows which were apparently killed in a tornado by straw being driven into their bodies by the blast. I would dearly love to see Fred transported across the Atlantic to replace the less flamboyant presenters who grace our screens at the end of the nine o'clock news.

The Legacy of Alferd E. Packer

A visit to the University of Colorado at Boulder brought to light the fact that their student union cafeteria bears a plaque naming it the "Alferd Packer Memorial Grill". Innocent enough, perhaps, but who was this Mr. Packer, who causes the reader to stop twice to make sure he has indeed read "Alferd" when his brain is tempting him to interpret what he sees as

"Alferd". A benefactor? Or a distinguished member of the Board of Regents, like the Mr. Coors of Coors Beer (brewed with Rocky Mountain spring-water)? No. It turns out that Alferd was a Colorado gold prospector, who set out for the mountains with five companions in February 1874. As frequently happened in those times, the winter took its toll of the party, and Alferd emerged in April as the sole survivor, struggling back to the pioneer civilisation of the day. What had happened to the other five? How had our friend Alferd survived the severe conditions of snow, ice, little warmth and even less food? It transpired that Alferd had - yes - eaten them, and was duly charged and convicted of cannibalism. The case aroused considerable public indignation. The judge was incensed enough to remark, so the record goes: "There were only six Democrats in Hinsdale County, and you, you son of a bitch, you ate five of them!"



Alferd served his time, and in local history his name has become commemorated (or memorialized if you prefer the American) by placing it forever over the doors of a few emporia noted for their provision of institutionalized nosh. Recently, it seems that alumni of the University of Colorado have been spreading their influence more widely, and a similar plaque, placed on the wall of a Department of Agriculture cafeteria in Washington D.C., had to be forcibly removed by a disapproving official. The Washington Chapter of the Friends of Alferd E. Packer have, however, had more success in distributing cards printed with such windfalls as "serving his fellow man since 1874" and "he never met a meal he didn't like". A nice tale - what prize to the person who first mounts a plaque in the UK?

Cornered in Kansas

The United States now has a universal speed limit of 55 mph, introduced as an energy saving measure. It is a feat of extreme will-power to keep down to 55 mph on a dead straight, flat road across the plains, with such a low traffic density that it is an excitement to pass another vehicle. On the way back from Colorado

we had a long drive: 670 miles in a day to reach Stillwater. Shortly after passing, of all places, Dodge City, I must have had a dreamy moment at the wheel and the next thing we heard was the sound of a police siren urging us to pull over. The state trooper duly approached, looking very smart in his grey uniform and cowboy hat. I wound down the window, expecting some verbal unpleasantries. "Good afternoon, Sir!" he drawled, "and how are you today?" Very well, I thought, until now. "Do you know, Sir, that you have



been clocked by radar at 67 mph coming round that bend back down the road?" I showed genuine surprise. Inwardly I thought: what bend? Roads in Kansas don't have many bends. Could I have missed such an unusual event? Outwardly I pointed out that I had been trying to keep the speedometer around 60 mph, which although in excess of the legal 55 is not considered a heinous sin. I couldn't have been going as fast as 67. Also, during the moments before apprehension I had been in the process of operating the windscreen washers to remove the usual dead bugs, an operation which inevitably results in a slight lowering of speed. "Well, Sir" he said "I guess your speedometer must be reading low. I should advise you to get it checked. Could I see your licence please?" The British licence caused more friendly banter, particularly since the date of birth on the new Swansea version appears in a gobbledygook code. I admitted my age, and then my height. He asked for my weight. Now I know my weight in stones, and it's not for wide circulation. Multiplying by fourteen is not easy on Sunday afternoons, so we settled for a compromise in pounds which satisfied the trooper and slightly flattered me. By this time it was clear that, in a very friendly and courteous way, he was booking me, and the Oklahoma licence plate and British licence added only to the politeness and amusement of the kill. The trooper would be able to report to his wife and colleagues that his boring Sunday spell by the side of Route 154 had been brightened by being able to book an Okie and a Limey at one and the same time. Completing the paperwork, he told me that I should telephone the Ford County Court in Dodge City on or after the

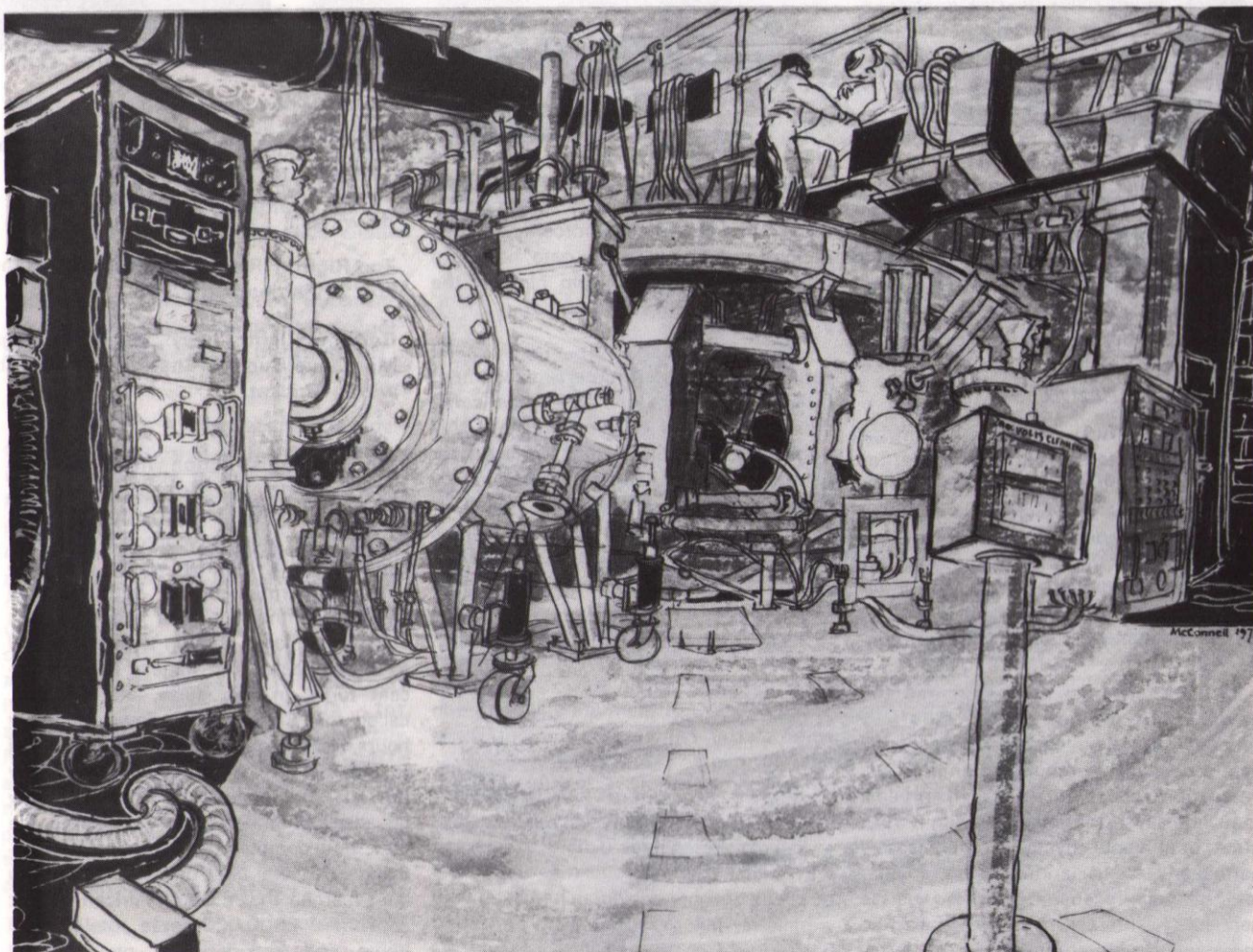
following Tuesday to enter my plea, and that he should really keep my licence as a "bond" that I wouldn't run away. However, since I was a "doctor" (it says so on my licence) and therefore obviously an honest and upstanding citizen, he would trust me to telephone in. The local judge was a good guy, so not to worry much about the consequences. He then kindly volunteered that the judge eighty miles down the road in Kingman was real mean, and in his words: "You make darned sure you keep on the double nickel (ie two fives) when you pass through his territory!" With that he wished us a pleasant journey and we went on our way.

I drove through Kingman County very sedately, contemplating the blow to my automotive pride and, more importantly, the possible blow to my pocket. Fancy being done for speeding, and especially near Dodge City. Perhaps I could challenge the judge to a shoot-out on Main Street. Would I end up on Boot Hill?

With trepidation, I phoned in on Tuesday. Maybe if I turned on the charm and played the innocent alien visitor, they would be lenient. I waited for the phone to be answered with baited breath. "Good afternoon, this is the Ford County Court Traffic Violations Office, Mrs. X (I forget the name); can I help you?" I explained my predicament; how, as a visitor to another state from a far-off country, I had been booked for speeding by one of their state troopers. "Oh, ain't that too bad?" she said. "What is your name?" She assumed I would plead guilty, everybody did. I said I supposed so: despite disbelieving the radar, I had no intention of returning to Dodge City to fight the issue. "Well" she said pleasantly, "that will be a \$15 fine and \$10 court costs." You could almost hear the "ding" of the cash register. I breathed a sigh of relief at the almost trivial penalty and later sent off the money. I enclosed a letter complimenting them on their courtesy. Never have I been ripped-off so politely.

This saga may add some credence to the rumour that some states originally objected to the 55 mph limit and said they would not enforce it. The Federal Government then announced that if it was not enforced, road funds would be cut off. Furthermore, evidence that the states are enforcing the law should be provided by keeping up the number of speeding tickets issued. Was I a victim of this "Catch 22" situation? I shall never know.

Finally, a post-script; how did I manage to find the time to record these incidents for "Harlequin"? You guessed. What else can you do when you have ten hours to wait at Detroit airport while Mr. Laker's plane trundles over from strike-hit Gatwick, leaving you with a bookstore full of unappealing paperbacks and a briefcase full of physics? Still, we did make it back home and the trip was very worthwhile. Perhaps the corn grows higher a little later in the season.



The DITE project (Divertor and Injection Tokamak Experiment) at Culham Laboratory - by Seton McConnell

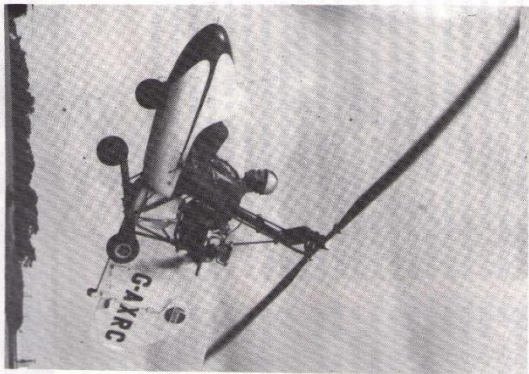
CHAIRMAN OF THE 'ROTARY CLUB'!

Working with the General Heat Transfer Group of HARWELL's Engineering Sciences Division Peter Lovegrove spends his time in a very down-to-earth way, dealing with the engineering problems of commercial customers. But 'down-to-earth' could hardly be said to describe his main spare-time activity. Peter builds aircraft for a hobby, not model aircraft - which he did for many years in his youth - but full-size machines. Nor are his aircraft just straightforward fixed-wing machines; his obsession is for ultra-light gyroplanes. If, like us, you do not know exactly what that means, it refers to rotary-wing aircraft which do not have powered rotors. Older readers may remember the pre-War autogyros of Señor Juan de la Cueva; Peter's little machines are very much smaller, very much simpler, but probably not very much cheaper! If you are still totally baffled, the 'Little Nellie' which James Bond used in the film 'You Only Live Twice', was a small gyroplane built by Ken Wallis, a friend of Peter's.

After progressing through the various stages of model aeroplane construction, including getting so interested in radio control systems that they became a full-time job during a five-year absence from HARWELL, Peter decided that it was time that he either got down to building an aircraft in which he could fly, or gave up the idea for good. About that time he had the good fortune to meet Geoffrey Whitley, the father of Rex Whitley, who is an engineer with Research Reactors Division at HARWELL. Geoffrey flew an American design of gyroplane. In both a powered and glider form, and eventually trained Peter to fly them both. After doing the necessary fixed-wing training at White Waltham aerodrome, Peter was able to obtain his Private Pilot's Licence (Helicopter/Gyroplane).

His first effort at constructing a gyroplane was to build a gyroglider for use on tow behind a car. The only space he had available in which to do this was the loft of his house, so he built it there crammed up in the rafters! That episode earned him the dubious merit of coverage in the national newspapers, as well as several appearances on Pathe Pictorial, TV, etc.

Soon afterwards, Peter acquired the powered gyroplane from Geoffrey Whitley and flew that for some time before deciding to rebuild its engine, etc. into a more robust airframe. 'In its original form,' he says, 'that machine taught me a great deal about flying gyroplanes and particularly about landing them engine-off. This was because its engine was the genuine 'Fairmaster', guaranteed to find more ways of stopping at awkward moments than one could have thought possible! After one or two forced landings



with engine failure, one became quite blasé! Fortunately, one of the main attributes of ultra-light gyroplanes is their ability to be landed in very small spaces, as he found out when he force-landed in a paddock too tiny to have a gate; he had to round up a squad to help him lift the whole machine over the fence!

After rebuilding that machine, he satisfied his constant urge to experiment by making others until the time came when he fancied using a modified VW engine as the power-plant. A firm near Lambourn, who had supplied Geoffrey Whitley's two machines, were looking for a design for a VW-powered gyroplane. Since Peter flew regularly from their airstrip at Membury Airfield, it was not surprising that he ended up designing a machine which they manufactured under the name of 'Cricket'. About 42 of these machines were built in the very early 70's and quite a lot of them are still around in spite of the hampered efforts of some amateur pilots.

Later, this same firm wanted to carry out some work on a prototype two-seat gyroplane. Peter finds it hard to imagine why, since two previous tries under the auspices of other designers had been very expensive failures. However, he found himself doing the design work. This machine took two grilling years of spare-time and holiday work to complete,



Above: Cricketer Ted Dexter flying his Campbell Cricket! Peter checks the Cougar against his drawings.

Top Right: HRH Prince Charles tries the Cricket for size at Farnborough 70.

Bottom Right: Lady Sarah Courage and Mr. Montague Curzon, Chairman of Campbell Aircraft, with a Cricket.

with the construction firm, Western Airways at Weston-super-Mare, seemingly forever shouting for the next drawing. In order to approach the task sensibly, in a manner which gave the Lambourn firm credibility with the Civil Aviation Authorities, the machine was constructed large enough to be converted to a two-seater, but initially in a single-seat form. In this guise, the machine, called the 'Cougar', was flown for many hours, including a trip across the Channel to the Paris air show. When the money ran out and the next sponsor withdrew because of world monetary problems, the craft had completed 130 hours of test-flying at a total cost of £19,500. It was later learned that a South African project consumed £500,000 for a total for 30 hours and abandonment on technical grounds, so the Weston project was deemed a reasonable success.

In common with all aircraft, home-built ultra-light gyroplanes have to be constructed from "approved" (bonded) materials.

- The machines have to be inspected by the Airworthiness Requirements Board after completion of construction. They are then given a "Permit to Test" so that they can be flown for a restricted time, in a restricted area. If still satisfactory, they are then given an annual "Permit to Fly", renewable by annual inspection.

- Normal rules of the air apply to the piloting of them, viz. not less than 500 feet above an assembly of persons, building, etc., no flight in cloud or at night unless specially equipped and authorised.

- Average time required for the construction varies from eight months to three years, depending upon the complexity of the machine in question.

- Home-built machines are usually single-seaters, since a two-seat machine is classed as a passenger-carrying craft and is subject to even more stringent controls by the ARB.

- Most amateurs use converted VW engines, modified to have capacities of up to 2200 cc. or McCulloch, ex-drone engines. The latter are very light but, unfortunately, are extremely prone to fail in flight. The sudden eerie silence can be unnerving!

- Parachutes are not worn, because to jump would involve the greater danger of being "bacon-sliced" by the rotor!

One of Peter's more recent jobs, apart from building himself a machine a year or so ago which he is still flying, was to rebuild a friend's 'Cricket' in a rather souped-up form. A 2.2 litre VW conversion was used as the power-plant and a new rotor and propeller fitted. This machine now sports a 'British Airways' colour scheme, designed by their art department and painted by B.A. apprentices! Its owners use it to take part in the B.A. display 'circuit', for advertisement purposes. It is regularly flown by Capt. Kitchen, of Bordon, who is a Tristar captain. He flew the little machine at Heathrow recently for a photographic session. This was the first time a gyroplane had appeared there for decades and quite a few heads turned!

Meanwhile, Peter has rebuilt a two-seat gyroglider for another friend and is currently designing his next powered machine!





OFF TO LOOK AT THE DARK SIDE OF THE MOON?

There has been evidence of little owls breeding at HARWELL for a number of years, and earlier this year a pair took up residence in the 7" diameter breach mechanism of a World War Two gun barrel used by Dr. John Jelley in radio-astronomy experiments.

Fortunately, John is a keen naturalist, and he would be the last person in the world to pull the trigger on his guests. He played host to these birds some years ago, when young were reared in the rabbit workings under a wooden hut in the Meashill area.

The little owl is widely distributed throughout Southern Britain, but it is by no means common. In ornithological records for Oxfordshire, only four breeding pairs were substantiated as recently as 1975, and there are fears that the species is declining.

It is much the smallest of British owls, but it is often seen in daylight. Our picture was taken one afternoon in August by observant HARWELL photographer Eric Jenkins. Young owls have been seen in the vicinity since, so we can assume another breeding success.

T. Norvell

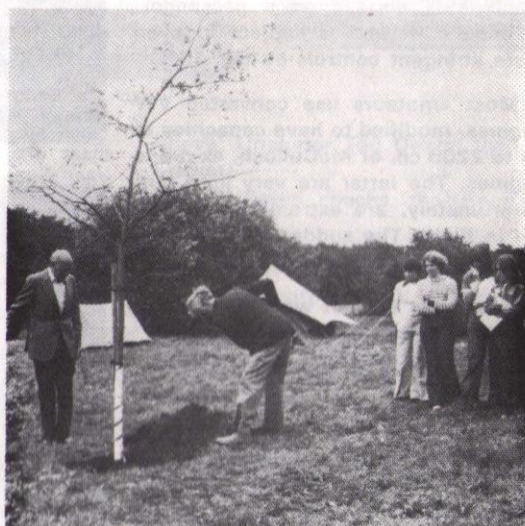
Rounders League 1977

Three of last years semi-finalists were again in the last four this year. MDD beaten $1\frac{1}{2}$ to $3\frac{1}{2}$ by NRPB and MET beaten $3\frac{1}{2}$ to $6\frac{1}{2}$ by a strong ATLAS side. In the final Eric Thomas (without taking his sweater and tie off) scored 4 superb rounders to enable ATLAS to defeat NRPB by $3\frac{1}{2}$ to $2\frac{1}{2}$. Competition was stronger than ever this year, and next year we may see a few different teams in the final. Many thanks to Bob Piller and Bob Booth for the fine organising.



A.	P	W	L	D	RF	RA	Points
ATLAS	6	5	0	1	$64\frac{1}{2}$	$32\frac{1}{2}$	11
NRPB	6	4	1	1	$42\frac{1}{2}$	25	9
424	6	3	3	0	$26\frac{1}{2}$	42	6
EMSA	6	2	3	1	$40\frac{1}{2}$	30	5
220	6	2	3	1	$36\frac{1}{2}$	$26\frac{1}{2}$	5
150	6	2	4	0	34	$26\frac{1}{2}$	4
Reprographic	6	0	6	0	16	76	0

B.	P	W	L	D	RF	RA	Points
MDD	7	6	1	0	$61\frac{1}{2}$	25	12
MET	7	6	1	0	$65\frac{1}{2}$	$47\frac{1}{2}$	12
MRC	7	5	2	0	51	33	10
SRC	7	3	3	1	57	53	7
EMS	6	2	4	0	37	38	4
351	7	2	5	0	$32\frac{1}{2}$	51	4
401	6	1	4	1	$30\frac{1}{2}$	$49\frac{1}{2}$	3
Contracts	7	0	7	0	$15\frac{1}{2}$	$15\frac{1}{2}$	0



Only a relatively small number of the general public turned up for the first open day at the nature reserve situated within the perimeter of Didcot Power Station. Those who did were able to see Bruce Campbell plant a Jubilee oak and then tour the marked trails. The reserve was opened in 1969 and it won the Countryside award in 1970. The management committee includes representatives of the local naturalists' trust and the education authorities. The reserve is supervised by the headmaster of the nearby Sutton Courtenay Primary School. Schoolchildren under supervision are able to study the development of a natural area and are able to use a bungalow at the reserve as a study centre.



ELM DISEASE - SHADOW OVER THE SOUTH...

Written and illustrated

By Reg Wilkinson, MRC

Although Dutch elm disease no longer hits the headlines there is plenty of evidence to suggest that it is continuing to spread unabated. On the Wantage estate where I live, a number of trees have been felled during the past two or three years, and this summer several more have succumbed and will have to be removed in the near future.

The open country in the Vale of White Horse is dominated by lines of dead elms in the hedgerows, and their skeletons resemble those of the trees in the battlefields of Flanders.

Thousands

A little over ten years ago, approximately 25 million elm trees could be found south of a line between The Wash and the Mersey estuary, and included among them were thousands in "Mercury" country. Now, a third to half of those trees have died or are dying from the effects of elm disease.

The current epidemic of elm disease is caused by a particularly virulent strain of the fungus, *Ceratocystis ulmi*. During the winter months this grows in the larval galleries of the two species of bark beetle that are responsible for its transmission in England and Wales. The beetles, *Scolytus scolytus* and *Scolytus multistriatus*, breed under the bark of trees already suffering from the disease.

When the temperature rises in spring the beetles complete their development and emerge from the infected elms. They then fly to healthy trees to find food, carrying the spores of the fungus on their bodies. Once established, the fungus gradually blocks the sap system of the tree, thus cutting off the leaves from their source of water and nutrients.

Experts have suggested that the present epidemic of elm disease was probably caused by the importation of infected logs into Britain from North America where the disease is endemic. During the 1960's, elm logs were carried across the Atlantic as deck or loose cargo and landed at Avonmouth, Chatham, London, Portsmouth and Southampton. They were then transported by road to sawmills in the vicinity of these ports for conversion to planks and veneer.



Its aftermath at AERE Charlton housing estate, Wantage.

Between 1965 and 1969 there were severe outbreaks of elm disease in North Gloucestershire, South Essex and Hampshire. Since then the fungus has gradually been carried over the rest of Southern Britain. As Berkshire, Oxfordshire and Buckinghamshire were vulnerable to attack from three directions it is hardly surprising that the elm trees in these counties have been severely infected.

So far two main methods of combating the disease have been tried, but neither has proved particularly successful in preventing the spread of the fungus. When it was first realised that the disease had reached epidemic proportions, local authorities were given statutory powers to fell infected trees, including those on private land.

This method did not work because in general no attempt was made to prevent the transportation of infected tree trunks into areas that were free of the disease. However, a few local authorities did insist that the bark and branches of infected trees be burned on or near the site of felling operations.

A second method involving the injection, under pressure, of a fungicidal chemical into the sap streams of trees has proved to be costly and only partially effective in the prevention of infection. The injections cost approximately £2 per foot of circumference, and most local authorities just cannot afford to treat large numbers of elms.

Now it looks as though the disease will just have to run its course, with district councils and individual owners felling dead trees when they become dangerous or too unsightly. The cost of felling a tree can be anything up to £125, depending on its size and position, and a suitable sapling to replace it will cost between £8 to £12.

Due to the fact that so many elms have been felled in such a short time, their disposal has become as big a problem as their replacement. The woodyards are filled to overflowing, the sawing up of tree trunks simply for sale as firewood is an expensive business.

One of the best methods of storing elms is under water. If disused gravel pits could be utilised to this end, local councils could store the wood for years if necessary, until there is a demand for elm wood once more. Unfortunately this method of storage is not practical in some areas because of the cost of transport to a suitable gravel pit.

The problems associated with elm disease would probably be alleviated if we had two or three very hard winters in quick succession. The fall in temperature would help to kill off the larvae of the bark beetle and thus cut down the rate at which the fungus spreads.

Meanwhile, the shadow over Southern Britain will continue to lengthen until the epidemic dies down naturally or until the last elm tree has been felled. Let us hope the latter is not the case.

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Letter to the Editor

May I, through the courtesy of your
columns, express my gratitude to all -
pupils, parents, Managers and friends of
Chilton School - who have contributed so
generously by thought or deed to my
retirement and presentation. Due to the
Great Concourse assembled in the School
Hall on Friday last, I was unable to thank
all personally. I am also aware of the
thoughts of absent friends.

The handsome cheque for £500 from
such a small-school community was so
much appreciated; the money will go
towards the eventual purchase of a
motor-caravan when, Heaven willing, my
wife and I shall be revisiting well-loved
haunts - and seeking out Pastures New.

May Chilton School flourish and
prosper!

Yours truly,
Frank Denzey
(lately Headmaster, Chilton School)

CECILIA Millson's *Tales of Old Berkshire* is the sort of book
which is a pleasure to review. The stories it contains are
many, varied and not too long. Some of them originate from that
part of Berkshire which is now incorporated into Oxfordshire. It
is therefore appropriate that the stories should be published
before the North Berkshire we once knew is forgotten forever.

Many readers will already be familiar with some of the events
and characters in the book such as the Newbury Coat, the White
Horse Hill Fair, the Hocktide at Hungerford and the famous
Jack o' Newbury. However this does not diminish their appeal,
or Mrs. Millson's ability as a storyteller.

One of the best tales is entitled "The Amazing Journey of
William Bush of Lambourn" and it tells how a gentleman living
in 1607 fulfilled his ambition to travel by air, land and water in
the same vessel. His flight was not of the conventional variety
and it very nearly wrecked Lambourn Church.

Another interesting story is about the candle auction which is
held in the village of Aldermaston every three years to decide
who rents a plot of land known as Church Mead. A horseshoe nail
is inserted into a tallow candle one inch from the top. The candle
is lit and the bidding starts. Whoever makes the last bid before
the nail falls out of the melting tallow gets the land for the next
three years at the sum he had bid.

Aldermaston is probably the last village in England to retain
this old custom. When the ceremony is over the horseshoe nail
and the candle with its candlestick are stored away for a further
three years to await the next auction.

Misers figure in two of Mrs. Millson's stories. One was an ex-
cellent Member of Parliament and the other was a very efficient
vicar whose parishioners did not suffer as a result of his miserly
ways. Clerical gentlemen are also the subject of two more
stories. One of these gained fame by writing a history of the
bible and the other was made Bishop of Oxford in 1628.

King James I appears in "King James and the Tinker" and
also in "Tales of the Bath Road". In both he is out hunting and is
taken for a commoner by the people he meets and the stories tell
of the amusing consequences of these meetings. The latter tale
also described the adventures of a number of highwaymen who
eventually ended up on the gibbet, whereas "The Lonely Gibbet
of Combe" is the story of a couple who were hanged for a
different crime altogether.

In fact Mrs. Millson has put together a book of tales which
touch on a feast of subjects including fantasy, greed, illusion,
romance, magic, violence, the fun of the fair and others too
numerous to mention.

Mrs. Millson lives in Bucklebury and has already written a
book entitled *Bucklebury's Heritage*. She is also well known
throughout the county for her talks and newspaper articles on
Berkshire's past. *Tales of Old Berkshire* was written in response to
requests for her stories to be made available in book form. It
costs £1.95 and is published by Countryside Books, Thatcham,
Berkshire.

Reg Wilkinson

VIEWPOINT

- WOMAN'S ROLE

- SUE COWLES



We have all heard a lot about Women's Lib. in the last few years. Some of it I have agreed with; some of it I have thought exaggerated; some of it unnecessary, even funny, but this, the latest, I am utterly opposed to: an activist group of women in the United States claims that women should in any future war be up there with the men, flying the jets and pushing the buttons to release the missiles. I do not doubt that women are just as good as men at flying jets and pushing the right button at the right moment, just as I am sure they are equally capable of flying a Jumbo Jet or Concorde in peacetime, but I assume that they include the less glamorous aspects of fighting a war as well, such as wielding the knife and the gun in hand-to-hand combat. They could hardly be accepted for one and not the other.

I myself should not feel that all things were equal if faced with a sturdy six-foot male, out to kill, with just a knife in my hand, or worse, only my fists. However, I will not bore you with the over-argued point of comparative strength and/or stamina - it has all been said before, many times.

I am concerned with the more innate and fundamental reasons why I do not think women are suited to play the same part as men in a war. To begin at the very beginning, not very long after conception the unborn child begins its development in one of two very well defined categories - male or female. I dare say we may all agree that the better defined each of these is, the better we like it. The sex hormones work on the child before as well as after birth and they do not, as if by magic, ignore the existence of the brain, but influence that as well, scientifically, to be masculine or feminine.

When a little girl is born, she continues along the long road to womanhood, during all of which the female sex hormones will go on having a radical effect on her development, and reinforcing these hormones all along the way will be the pressures and influences brought to bear by her family and society, particularly in the very close mother/daughter relationship. Within this relationship, every instinct will tell the girl that the more like her mother she becomes, the closer she will be to becoming a successful human being. There is no question of right or wrong here, it is simply the way things almost invariably work. Few little girls delay long in learning to play with dolls, their substitutes for babies; dressing-up in high heels, hats and long dresses, the better to attract the male, however subconsciously; and later worshipping "teenage idols", their only substitute, for the time being, for men of their own.



Are we then to expect that this girl, after all this physical, social and psychological pressure, at the age of eighteen, will be able to forget the training of her formative years? When she has been preparing herself to have a husband and children, accepting many physical discomforts and limitations for the sake of eventually creating a new life, can she forget all that and go out deliberately to kill - destroy life, when nature and all her instincts lead her to save it, preserve it, create it?

I do not wish to imply that men are natural killers. Far from it; though nature and history invariably show us the male of the species doing any killing that may have to be done. However, I am not discussing whether men are suited to killing or not, but whether women are. Neither, by the way, am I saying that women are not just as capable as men of making a career in life apart from the home and hearth. I am interested in woman's essential nature, her chemistry in conjunction with her psychological and social being. I do not think one can compare killing alongside men with working alongside them at, say, the laboratory bench. No. it is *killing* which is fundamentally against the female nature, and for this reason I do not think women are likely to be very good at it. Again, nature and history show us the female of the species almost invariably killing when on the defensive, not on the attack.

So, the first to be called up, then, when war is declared, would be hundreds of thousands of young women, between the ages of 18 and 25, going out to kill and be killed. You may say that women should also be willing to make the supreme sacrifice. Well, in modern warfare women would certainly be in very real danger of dying in their own houses. For this reason, also, there will be more than enough of the work which I think comes naturally to the female: that of saving and preserving life; that of trying not to die, so that they will be there to have the children of the future generation, and being there to look after the children, the disabled and the wounded. Perhaps these women feel that this work is belittling to them. I think not; I think that it is their natural place in the event of war and that to which all the most powerful influences of their lives will have worked towards.

I appeal to the gentlemen to come to the defence of their women and children, not only against our enemies, but against this new "monstrous regiment of women" who would have us be not equal to men, but identical to them, which I feel would be a tragedy in itself.

"HARLEQUIN", G159, Bldg. 77.

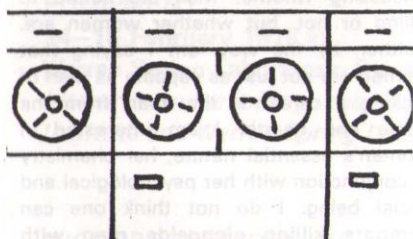
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In step with recent trends, "Harlequin" will in future be spelling "gramme" as "gram" and "programme" as "program", but one of our staff artists poses a problem:



"Why can't I call my program 'computerised record of authority personnel'?"



TWENTY YEAR'S SERVICE

Back Row (left to right): W. Lilley, J.D. McCann

Front row (left to right): J. Furnival, J.J. Taylor (25), J.B. Price

CODE- WORDS

THIS crossword puzzle has only one clue—the word that is already printed in it.

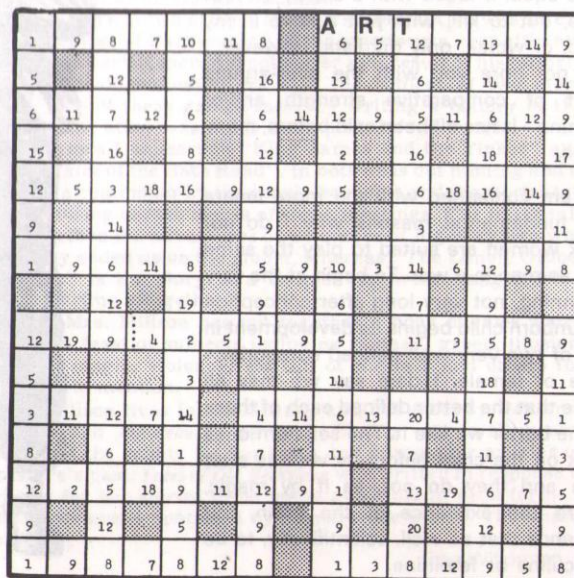
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6 O; 7 I; 8 T; 9 A; 10 N;
11 F; 12 C; 13 G; 14 R; 15 V;
16 U; 17 P; 18 D; 19 B; 20 H.



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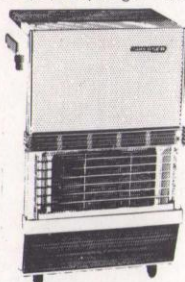
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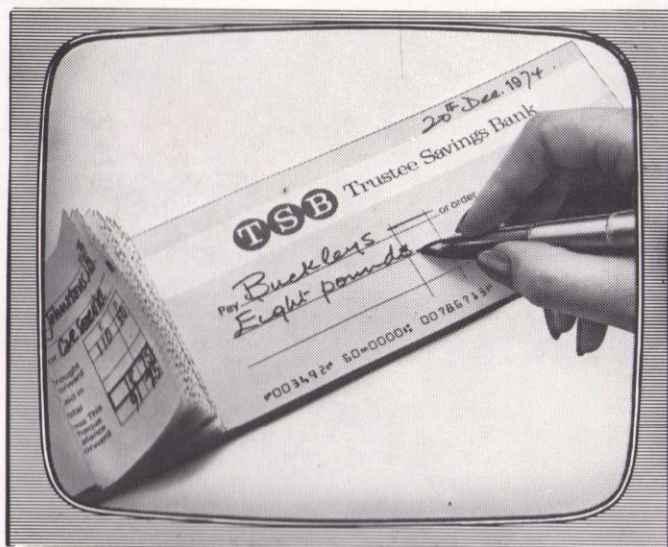
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