

# ELECTRIC BOAT *News*

The Journal of the Electric Boat Association

Volume 8 Number 1 Spring 1995

ISSN 0969-031X



**WORLD RECORDS**

**EARLS COURT '95**

**VISCOUNTESS BURY**

**CYMBA**





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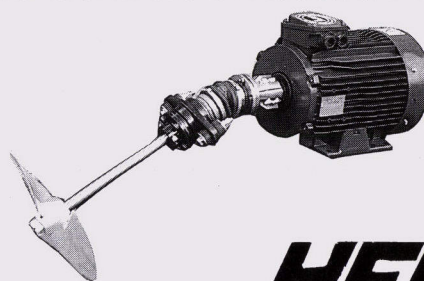
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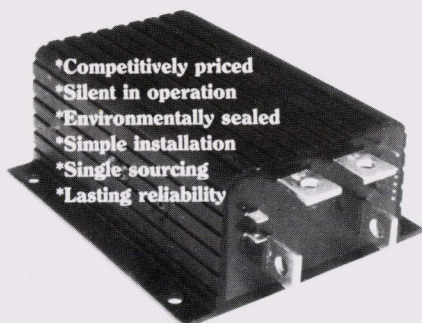


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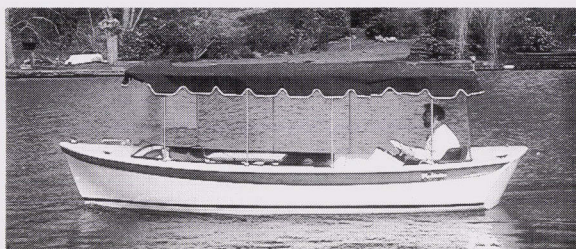
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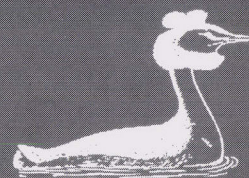
Some of the events of 1995 which may be of interest to EBA members. The EBA may be present at some of the events, perhaps with its own stand.

|                   |  |
|-------------------|--|
| <b>MAY 18-21</b>  | Inland Waterways Boat Show, Nottingham         |
| <b>MAY</b>        | IWA Trailboat Rally                            |
| <b>JUNE 3</b>     | EBA SUMMER MEETING and AGM                     |
| <b>JUNE 14</b>    | Eighth Wargrave Rally                          |
| <b>JUNE 24</b>    | River Pageant, Boulter's Lock                  |
| <b>AUG 12-13</b>  | Traditional Boat Rally, Henley-on-Thames       |
| <b>AUG 26-28</b>  | IWA National Waterways Festival, Waltham Abbey |
| <b>SEPT 2</b>     | Cookham Regatta. Parade of Boats               |
| <b>SEPT 10</b>    | Broads Rally                                   |
| <b>SEPT 15-23</b> | Southampton Boat Show                          |

Notice of other events to Edward Hawthorne, please, on  
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Electric Boat News welcomes contributions from readers and members. If you have anything you think might be of interest, please send it in. Bear in mind however that due to circumstances sometimes beyond our control, we cannot be held responsible for any damage or loss which may occur to this material.

Items of interest include letters, reports on rallies or events, reports of particular cruises or trips, articles or advice on building or running electric boats, and reports on items of equipment. We also welcome manufacturers reports on new items of equipment or boats.

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# The Journal of the Electric Boat Association

Volume 8 No. 1 Spring 1995

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*Cover pictures: Earls Court dressed overall for the London Boat Show.*

*Smaller picture: "Up spirits!" A warm welcome in the Press Room*

## The Chairman writes ...

Well, the 1995 London Boat Show is over and we are into a new season.

Earls Court was its usual exciting, bustling self with lots of keen boaters looking around. We electric boaters were not disappointed - our banner was carried by the Thames Electric Launch Co. who had a very prominent stand near the entrance. This issue of *Electric Boat News* carries a full report of the show.

I recently had a meeting with the British Marine Electronic Association, principally to discuss aspects of safety with regard to electricity and boats. The BMEA are writing a guide for boat inspectors (for use in connection with the mandatory boat 'MOT') which may have considerable implications for us. Because of the obvious differences between electric boats and internal combustion engined boats, special provisions will be necessary. The EBA committee is monitoring the whole situation and more details will be given in future issues of this magazine. In the meantime, if you have any questions, views or comments about this, please write to me.

At their meeting in February, the EBA committee approved a small increase in subscriptions. For 1995, the rates will be: user member £22, trade member £220, trade member with up to 3 employees £50. This is the first rise for over two years and reflects the increase in activity by the Association to promote recognition and development of electric propulsion for boats.

Enjoy reading this issue - and a happy Easter to you all.

*Phil Horsley*

*Grebe's-eye-view of the Earls Court pool, 1995*

## and from the editor ...

As we start Volume 8, *Electric Boat News* again reaches around the globe. In this issue, as well as "home news" from London, the Thames and the Fens, we carry reports from Holland and Australia and two major news items from the USA.

*E B News* has two aims: first, to bring you, the members, the most interesting news and views in the electric boat world and, second, to spread the message of electric boating as widely as possible. The bigger and brighter *E B News* is, the better we can serve both ends.

But a bigger magazine means bigger production costs and that is why we are beefing up our advertising department. EBA Secretary John Gardner (address etc. on our masthead) now doubles as *News* Advertising Manager. His first task was to produce a Rate Card - enclosed with this issue - and he is already bringing in new business. Three new advertisers have seen the benefits of bringing their products before the electric boating world through our pages .... and not just in the UK - the *News* is distributed around the world. (One of our trade members recently received an enquiry from Korea, specifically in response to his ad in *E B News*).

*Roy Devereux*





# EARLS COURT 1995

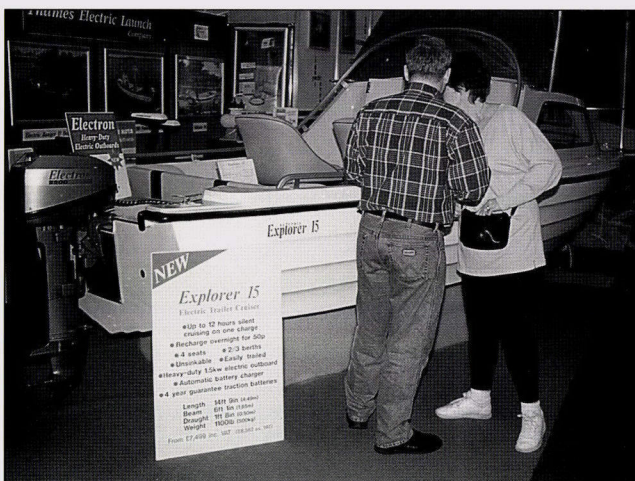
## Electric boats again prominent at London Boat Show

Last year, the Steam & Electric Launch Company emblazoned the word **ELECTRIC** across the London International Boat Show at Earls Court. This year it was the turn of the Thames Electric Launch Company to carry the banner - introducing three new products alongside their

petrol outboards in the 4 to 12 hp range. The *Electron* incorporates a heavy-duty electric traction motor, designed specifically for propulsion use and already used for road and recreational vehicles. TELCO say that their light weight, high power, high torque and high efficiency make them ideal for

marine use. An integral high-frequency electronic controller gives infinitely variable speed control. All the features that would normally be found in an outboard are there: trim, tilt, forward-neutral-reverse, with the options of tiller or remote steering and standard or long shaft. Suitable batteries and chargers are also available.

On their Show stand, the 2500 *Electron* was shown fitted to TELCO's



Show visitors admire TELCO's new Explorer 15 cruiser, fitted with the new 2500 Electron outboard

well-established *Voltaire 18* cruiser. On the pool, TELCO supplied a number of runabouts powered by Combi and MinnKota electric outboards for visitors to try.

For 1995, TELCO have developed new heavy-duty electric outboards, christened *Electron*. Two models are available at present, 1500 watt and 2500 watt, providing enough power to drive cruisers up to 30ft on canals or 25ft on rivers - comparable, they say, to

*Explorer 15* inland waterways cruiser. This attractive 4.49m LOA, 1.85m beam GRP craft is light enough to be trailed behind a family car and offers room for four adults on day trips and 2/3 berths in the cabin for overnight stops. With a standard battery pack, TELCO

claim 6 hours running at 4mph - or double that with an extra battery pack.

For their third Earls Court innovation, TELCO were marketing their unique '*Selectric*' combined diesel-or-electric drive. This system, which has been adopted by NRA for their Thames patrol boats (see *E.B. News* Vol 6 No 4), can

be installed from new or 'retro-fitted' to existing boats.

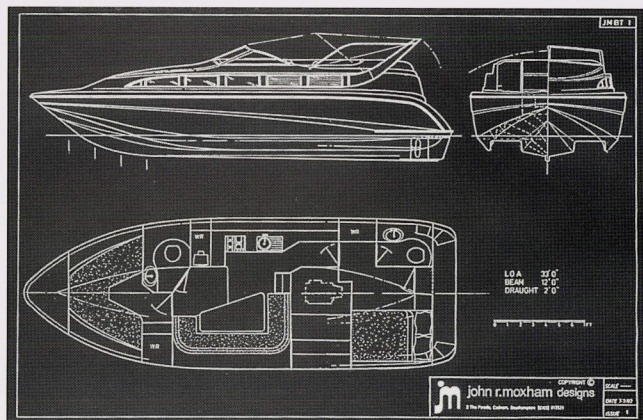
The price of the standard *Explorer 15*, (including an *Electron 1500* outboard, four 175Ah batteries, charger, controller, etc) is £6382 (ex VAT). The *Electron 1500* outboard is priced from £1725 and the 2500 from £2045 (ex VAT). The elegant *Voltaire 18* with standard features is priced at £10,850 (ex VAT). *Selectric* installations, naturally, require separate quotes.

TELCO, who are trade members, were kindly showing the EBA's display boards on their stand.

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At the other end of the Earls Court pool, electric boating was represented by *Quiet Light*, the new Broads hire boat from Len Funnell. On the days I was there, a constant stream of visitors was coming aboard to see this luxurious 33 ft cruiser.

As our drawing shows, the hull was designed by John Moxham as a development of the 'Hydraflow' low-wash design which he first showed us at Earls Court last year (see *E B News* Vol 7 No 1). In this version, step-aboard stern access across the bathing platform



Designer John Moxham's blueprint for Quiet Light

leads through to the spacious open plan saloon and galley. As well as two double cabins, the saloon settee converts to a further double berth. There is one steering position on the open 'upper deck' and another, for foul weather, in the forward cabin.

Three banks of twelve Chloride monobloc 6-volt batteries, delivering a total of 525 Ah, power a Nelco Nexus N132M 5kW motor through a Curtis controller. As in last year's ECO boat,



Youngsters try out TELCO's Combi on the Earls Court pool





the batteries are stowed under the side decks for maximum accessibility and easy venting. And just in case the skipper doesn't make it to the next recharging point, *Quiet Light* carries a Vetus generator, delivering 32 amps.

The Earls Court pool display, presented in conjunction with Eastern Electricity, included a video of *Quiet Light* cruising on the Northern Broads. She clearly handles very nicely but John Brunning, Len Funnell's Chief Engineer, says that there may still be some minor modifications to achieve optimum hire performance.

*Quiet Light* is available for hire from Len Funnell's own company, Broads Tours (01692 670711) or from Blakes Holidays Ltd (01603 782911).



*Quiet Light draws the crowds*

gion and BW's North East Region and the cards, in units of £5, will be available from lock keepers or from local NRA or BW offices.

Our picture shows Abigail Sagar of British Waterways demonstrating the use of the card.

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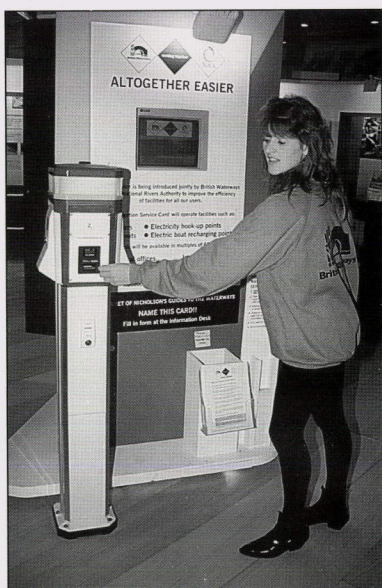
**On a prime site, just where thousands of Earls Court visitors funnelled through from one hall to the other, EBA committee member Pat Davis had an attractive little stand.** On Saturday 24 June 1995, the centenary of E J Gregory's famous picture 'Boulters Lock - Sunday Afternoon' is to be celebrated and the event is being organised by Pat's 'Corporate Regatta



*Pat Davis shows the famous picture*

**The National Rivers Authority/ British Waterways stand displayed a charging pillar, complete with a card reader.** The "Navigation Service Card" - a cashless payment system for mooring site facilities, used like a phone card - is intended in the first instance for pump-outs but will in due course, they say, be available for other facilities such as showers, mains hook-ups and electric boat recharging. It will be introduced from Spring 1995 in the NRA Thames Re-

Company'. "It will be a day of enormous festivity", she told Boat Show visitors. "We plan to recreate the picture at Boulters Lock and, in addition, there will be a carnival in Maidenhead and a River Pageant with a host of entertainments, floats and Victorian stalls". A full-size replica of the picture was on show at Pat's stand and copies are being sold in aid of Action Research.



For more information about the full programme for the day, ring Pat Davis on 01628 530600.

## ELECTRISCH VAREN

Every quarter we are pleased to receive a copy of *Electrisch Varen*, the magazine of the EBA of the Netherlands - and every quarter we are even more pleased to receive a translation of the highlights from our own Jan Smulders.

The most recent issue, he reports, devotes considerable space to the use of solar cells for auxiliary power on boats. Since last summer no less than twelve boats are being used on a demonstration project organised by ECOFYS, a Dutch consultant based in Utrecht. The solar energy is used to charge batteries which are typically used on sailing yachts to provide power for entering and leaving harbour with an auxiliary power unit and to provide lighting. Participants in this project receive a hefty equipment subsidy from the Dutch authorities. One object of the study is to assemble design data which will enable boat owners wishing to equip their boats with solar cells to buy ready-made packages rather than selecting, as at present, separate components from separate sources.

A further project using 18 boats and initiated by the EU is also under way and the boats are due to sail in 1995. So far the boat owners involved in this project are having to pay for the equipment themselves.

The magazine also features a rather attractive trip boat - *Electroboot* - which looks very similar to *Pennines Princess*, described in the last *E B News*.

Jan recently completed a major piece of work for us - a translation and summary of a 38-page study undertaken by the Netherlands Energy Research Foundation (on behalf of the Dutch EBA) into the environmental impact of electric boating. A summary of the report, including some of the graphs, will appear as a double-page spread in the next edition of *Electric Boat News*.

\*\*\*\*\*



In our last issue we announced the hot news that Lady Arran's electric boat world speed record had been broken in the USA. Through the good offices of Ken Matthews, editor of the American EBA magazine, we were put in touch with **John Paramore**, who sends this first-hand report of the action.

ter ... and he did.

His plan was simple: use existing hulls and parts of proven capability and find a way to power them electrically. He located a 12 ft DeSilva racing runabout and restored it, including installing a new bottom of aircraft honeycomb composite. This type of

# THE RECORD BREAKERS

Lincoln City, Oregon, located on the state's central Pacific coast, is a notable haven for vacationers seeking beautiful beaches and a Mecca for boat racers who gather there each October to participate in or watch record-setting performances by some of the world's fastest boats. This past October, nine speed records fell including a new electric boat speed record of 55.913 mph, set by Norm Boddy of Edmonds Washington in his boat *Hardly Normal*. The boat was one of three electric boats to run at speeds above the existing record.

Norm works for Sears Roebuck as an appliance repairman and this background, coupled with a long history in boat racing, plus a turn of fate, brought him to electric boat racing. Norm had been a marathon and offshore racer for many years before retiring from the sport. His wins included a marathon from Alaska to Seattle in which the boat began to break up near the finish. *Hardly NORMAL*, always a boat and team name, was, obviously, a play on Norm's name. Now racing electric boats, it really applies and we all wish we'd thought of it first.

While attending a county fair, Norm saw a display featuring a boat built by the local electric utility to participate in all-electric kilometre trials the company had sponsored. The boat was cute but suffered from 'engineeritis', weighing over 400 lbs empty and powered by trolling motors. Norm asked what it was, and was told, "Race boat". After controlling his mirth, he decided that he could probably do bet-



Mr Norm Boddy - the holder of the world electric boat speed record.

hull handles weight well and is very stable. Next, Norm bought a 48 volt DC forklift motor, had it modified slightly and installed it on an old Mercury outboard racing lower unit. Power was supplied by ten car batteries (120 volts).

Norm's first test was also his first record attempt - and nearly the last. At Spada Lake in July 1993, with a huge battery weight bias to the rear, Norm started from a balancing position near the bow. As he closed the switch, the boat made several dramatic leaps from the lake surface, with Norm hanging from the bow cleat like a flag, followed by a short and brutal run before the (fortunately) too-small batteries lost power. After recovering his wits, Norm made changes, followed by a season of testing and racing, and arrived at Devil's Lake hoping to set a record.

The record run was really without incident. Kilo trials consist of a flying pass in two directions through a measured one-kilometre trap. The official speed of the boat is an average of the speed for both passes. Boddy's initial pass was 58.820 mph, and since we allow no recharging between runs, the only real problem lies in getting turned around and back into the traps with no waste of energy or loss of speed. Norm's only concern was that the boat had slowed too much in the turn and had fallen off the plane. Energy lost to compensate probably took about 4 mph off the return run, clocked at a little over 53 mph. The average of his two runs was 55.913 mph. On his return to the pits, Norm was very excited and couldn't talk for a bit. He made a second run later as a back-up, then waited to see if one of the others would challenge. When Burton Gabriel went to 240 volts in an all-or-nothing attempt, Norm replaced his Interstate batteries with fresh Optimas (good for 8 to 10 mph more) and waited. Burton ran a first pass at 58.4 mph but the brushes collapsed on the return run, saving Norm's record.

At this time, Norm is working with designer Bill Blackwell to complete a new hydroplane. Bill is a well known race boat designer specialising in outboards. The goal for this boat is 80 mph or more.

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## THE SOLAR RECORD

by world record- holder

### BUD ROBERTS

*In our Summer 1994 issue we carried the story of Bud Roberts and Bob Glasemann's 136-mile trip through the Florida Everglades under solar power. Encouraged by the success of that trip, Roberts resolved to challenge the world long-distance record for solar-powered voyages. In December, a press release from the EBA of America announced that he had successfully completed a trip of 1033 nautical miles, monitored by officials of the EBAA, overtaking a voyage of 1017 nautical miles claimed by American Curtis Saville in 1991.*

*Mr Roberts (47) is a former military and civilian helicopter pilot. Today he runs a family farm, represents photovoltaic manufacturers and maintains a diesel repair facility. **Electric Boat News** invited him to give us a first-hand account of the trip.*



*Mr Bud Roberts - the holder of the world solar-powered distance record.*

summer departure from our highland home in Tennessee leads thru a series of 17 locks, across several river systems, to the Gulf of Mexico at Mobile. Then it's eastward to the village of Apalachicola, Florida. With a run to the nearby barrier islands, this will just exceed the required distance.

A boat is needed. Our friend, Mr. Phil Ohman, has a 26' x 4' Bolger design (similar to a classic British slipper launch) that he is willing to lend. Ray Electric provides one of their dependable 3.5 hp outboards. Exide

provides eight batteries. Photocomm comes thru for a solar array, while Cruising Equipment Inc. lends instrumentation. Penny, my wife, sews an insect-proof net around the overhead. Top speed turns out to be almost 10 mph; cruise is around 3 mph.

Departure is

August 5, 1994 from downtown Knoxville. We begin with a concern for performance. Our boat has an optimum float voltage range of 20 miles per day; however, this may be reduced by up to 70% by the factor of weather. A series of cold fronts provides some overcast but also many days of blue skies. Things go very well. Later, near the coast, these fronts will go stationary, and combined with tropic moisture, will create many days of adverse condition. Throughout the way we encounter the good wishes of those we meet. Many

facilities provide free docking. We join a migration of yachts seeking the winter sun.

Along the way our son returns to school. We single-hand thru the huge locks. Fellow EBAA members visit for a day. In Mississippi we visit with Clair and Michael Hughes, who are rebuilding a 72 ft. electric river boat. The lower Tombigbee Waterway proves a remote journey back in time. Lack of fuel facilities is of no concern to our solar motorboat.

Tropic moisture catches us just before Mobile. At the Fairhope YC, we move our 200 watt vertical array from port to starboard. The 400 watt primary array is overhead; however, our 200 watt vertical array proves useful during the early and late sunlight hours. At rest, anchors face this array into sunlight.

After some less than ideal weather, we complete 1033 nautical miles of travel. This involves 71 days of operation. Our November 21 end of cruise marks a total of 107 days on the water. Time in operation was 491 hours for an average speed of 2.1 knots (2.4 mph). During optimum conditions our system proves able to provide 100 or more miles of travel per week. During prolonged overcast conditions the system retains the performance to produce, at minimum, a 21-mile week against wind and flood. The estimated energy use is 185 kWh or 0.19 kWh per mile. The longest day's run 42 miles.

Photovoltaics offer the possibility of recharge independent of shore facilities. This is reason enough to continue development. In less sunny climates, these systems may still provide a secondary recharge capability. Environmental aspects are attractive.

Regarding the future, multiple hybridization seems logical. Today, the exciting thing about working with solar electric propulsion is the sense of adventure. The level of development of present day solar boats is similar to the airplane of 1910.

Our hope is that we have helped to begin an improvement in type which others will continue. The electric boat renaissance is moving forward. This is a great time to be an electric boater.

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Following our 136-mile Everglades trip, we are embarrassed to discover fellow EBAA member Curtis Saville has prior claim to the solar boat distance record. In 1991 Mr. Saville traveled 1017 miles out of Morocco in an attempt to cross the Atlantic. Curtis sends his congratulations regarding Florida.

Another trip seems in order. Route planning begins immediately. The conflicts of boatbuilding prevent Bob Glasemann from crewing. My 11 year old son, Dale, is recruited. A late



# VISCOUNTESS BURY

*In our last edition we broke the news that the classic 19th-century electric launch "Viscountess Bury" had been saved from the breakers' yard by a group of enthusiasts, including our own Edward Hawthorne. On December 7th 1994, over 90 people attended the first public meeting organised by The Friends of the Viscountess Bury at the Maltings at Ely. Our reporter was present.*

**Linda Ashton**, Chairman of the Steering Committee, gave an account of the acquisition of the Viscountess by her small group of friends, helped by Edward Hawthorne, and spoke of their determination to restore her, reconvert her to electric propulsion and have her operating again between Ely and Cambridge. The purpose of the meeting was to publicise the impending formation of a Charitable Trust, "The Friends of the Viscountess Bury", to attract volunteers to work on the project and to set about fund-raising.

The EBA had a high-level representation, including our President, Rear-Admiral Percy Gick, our Chairman Phil Horsley, the Chairman of the Users' Group, Edward Hawthorne and trade member Rupert Latham.

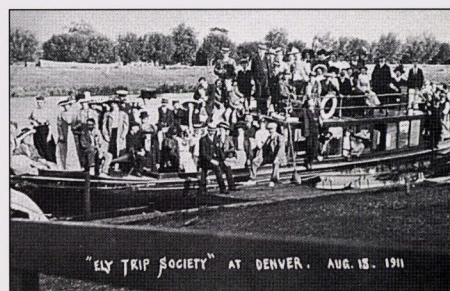
The speakers included:

**John Allen**, Secretary of Heritage Afloat, who said that his organisation had been formed to provide a focus for the many groups interested in maritime heritage. Although new, it already had over 40 members. They had placed the Viscountess Bury on their list of most deserving projects and had nominated her for inclusion on the

National Historic Ships Register. Heritage Afloat may also become involved in recommending projects to receive funds from the National Lottery.

**Edward Hawthorne**, Chairman of the EBA's User Group, gave a short slide presentation illustrating the history of the Viscountess from 1888 until the present day and showing why she is such a unique boat. The pictures were from Edward's forthcoming book on the early history of electric launches on the Thames and from the archives of the Ely Society and the Cambridgeshire Collection.

**Percy Gick**, the President of the EBA, told the audience about the resurgence in



the surveyor who inspected the Viscountess in 1991 and again in October 1994 on behalf of the Trust. Until the launch has been taken out of the water for its detailed survey, he could not say exactly what work would be required to bring her up to the required operating standards. However, he reported that the underwater hull was considered to be sound but there was decay and damage in her upper parts. He concluded that her condition merited her purchase by



*Edward Hawthorne with the Viscountess at Ely*

electric boating since the 1970s and spoke of his own experiences in building and cruising electric boats over more than 600 miles of the rivers and canals of this country. The increasing interest in electric boating has been shown by the growth in

the membership of the Electric Boat Association under his Presidency. Once people have experienced the benefits of an electric boat, he said, they become full of enthusiasm to own one.

The final speaker was **Bill MacGregor**,

the Trust with the object of restoring her to a normal operating boat.

During the general discussion, it emerged that there were a number of people who were acquainted with the Viscountess, including two who had worked on her during the 1940s and 50s, and many were interested in taking an active part in working on her.

Altogether a good start for the project.

*If you would like to join the **Friends of the Viscountess Bury**, contact Linda Ashton on 0353 661226. Perhaps you could also give practical help. As a Friend, you would receive a quarterly newsletter. Please make cheques payable to "The Friends of the Viscountess Bury" and send to "The Friends of the Viscountess Bury", The Wharf, Waterside, Isle of Ely, Cambridgeshire CB7 4AU.*

\*\*\*\*\*



*Linda Ashton. (Photo: Ely Standard).*





## CYMBA GOES ALL THE WAY!

One of the most detailed cruise logs that we have ever seen has fallen into the hands of the E B News.

It appears that in July last year EBA member Jack Henley, with his wife Rosemary and guests, took his electric canoe Cymba up the Thames from his home at Temple Mill Island, near Marlow, to the head of navigation at Lechlade - and back. They covered a distance of 172 miles in just over 50 hours sailing time, passing through 60 locks.

This epic voyage is recorded in meticulous detail in the log - including the times of arrival and departure at each lock, the precise distance between stops, the passengers on the day, the number of minutes spent waiting at each locks ... delays, towings, charging points ... even the room number at the overnight hotels.

Now that's what I call a log!

In a series of cheery phone conversations with Jack, we got the full story.

timbers and is powered by a 1.4 kW Nexus electric motor, served by eight heavy-duty batteries. She has two steering positions - at the stern and amidships. Weather protection is given by a canopy on hoops or, when out of use, by a tonneau cover.

Jack planned his week-long trip up the river very thoroughly. Working on the assumption that they would make about 18 miles a day, he went up by car beforehand to suss out overnight stops and charging facilities.

Wherever he could, he booked into riverside hotels and chose rooms right on the water. He

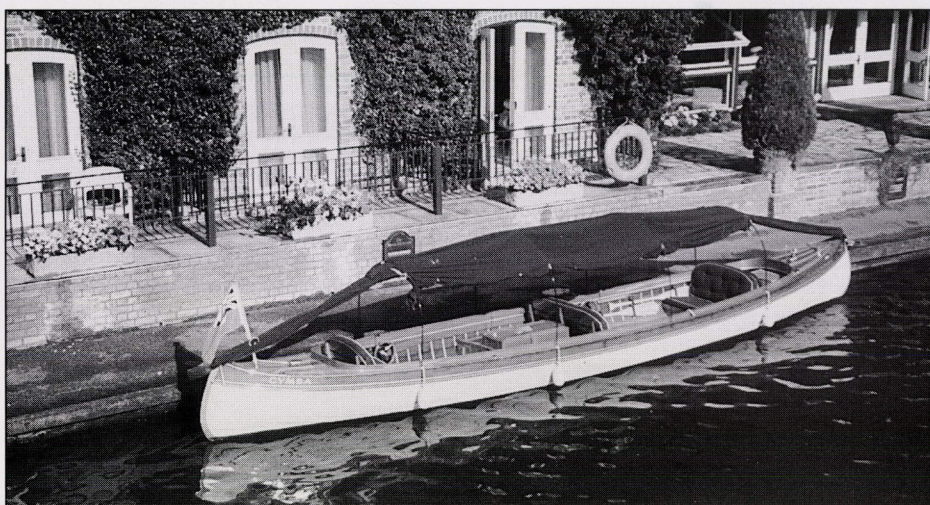
points.

Sometimes this meant having a long length of cable snaking across the hotel lawn all night. Nobody seemed to mind, but at one place the landlord advised him not to put out the cable until well after closing time!

An unexpected problem arose from the fact that the on-board charger, laid down in a box, got hot overnight and consequently cut out. More than once



L to r: Jurgen Knorpp, Jeff Greenhalgh, Rosemary Henley, Jack Henley.



Cymba outside the Swan Hotel, Streatley - with the canopy rolled up.

When Jack Henley first came across Cymba, he was really looking for something quite different. But his eyes fell upon this beautifully restored canoe and he fell in love with her. Cymba reputedly dates from 1904 and is said to have been once owned by Lady Astor at Cliveden. She lay derelict for years until she was restored and put up for sale by Peter Freebody in 1991. At 29ft, Cymba comfortably seats 6. She is clinker teak and mahogany on oak

can tell you the best rooms in all the leading hotels on the Upper Thames from which a cable can be run out overnight from a three-pin socket. Jack says he carried a set of adaptors for all known power

the party came down in the morning to find the batteries not adequately charged. "That put us in a bit of a stew". The solution was to prop the charger up and get some air around it - but that, in turn, involved making a makeshift tent to protect it in case of rain. This is real hand-to-mouth pioneering stuff in the best traditions of the electric boat trailblazers.

What will Jack do next? For 1995 he plans to go down the other way - hopefully to the head of the tidal Thames at Richmond - and possibly beyond. Could he get to the Thames Barrier? We shall see!

| Sunday 24 July : Newbridge to Lechlade and return to The Swan PH, Radcot.<br>(JH, RH, Jurgen & Ziggy Knorpp, Jeff Greenhalgh) |  |           |               |
|---|--|-----------|---------------|
| 9 locks; 24 miles   |  |           |               |
| Depart Newbridge  |  |           | 10.04         |
| - Shifford  | 3 mls  |           | 10.33         |
| - Rushey  | 4 mls  |           | 11.32         |
| - Radcot  | 3 mls  |           | 12.13         |
| Lunch at The Swan, Radcot   |  |           | 12.31 - 14.00 |
| - Grafton   | 1 1/2 mls  |           | 14.22         |
| - Buscot  | 3 1/2 mls  |           | 15.20         |
| - St Johns  | 1 ml   |           | 15.45         |
| ↑   | - Lechlade (Round House, furthest possible navigation point) | 1ml       | 16.15         |
| UP  |  |           |               |
| - St Johns  | 1 ml   |           | 17.00         |
| RETURN  | - Buscot   | 3 1/2 mls | 17.30         |
|   | - Grafton  | 1 1/2 mls | 18.00         |
| ↓   | - The Swan PH, Radcot  | 1 ml      | 18.30         |
| Charging at the Swan Hotel. JH/RH stayed overnight at home of Mr & Mrs J Greenhalgh.  |  |           | 8hrs 26mins   |

That's what you call a log!



## ELECTRIC BOATING HAS COME TO AUSTRALIA!

report from

**Bob and Julie Whadcoat.**

Some of your members may remember phone calls from us over the past couple of years seeking information on electric boating.

We operate cruises with our vessel "RUBEENA" on Lake Tyers in Victoria, Australia. This is in the lower eastern part of the Australian mainland.

"RUBEENA" was built and first licensed as a passenger vessel in 1912. She is built along traditional English design from New Zealand Kauri timber. Actually, seeing pictures of English boats in your Association journals made us feel we were looking at old friends as there are very few passenger boats of this design left in Australia.

She is 36 ft long and carries 42 passengers and 2 crew. Originally steam powered, she has been running over the last 18 years on a 4 cylinder diesel motor.

Approximately 3 years ago we watched a science program, "Beyond 2000", report on electric boating in England and the Steam & Electric Launch Co. ... and we were hooked on the possibility of converting our vessel to electric!

We set about gathering as much information as we could regarding electric motors and particularly their use in boats. The EBA in England were extremely helpful but could only help us so far. We were concerned with the cruise times we would obtain from each charge as this would be a crucial factor for our peak holiday times. We were told that in the end we would have to "suck it and see"! And that is exactly what we did.

Information and equipment in Australia was very limited but we eventually got together what was needed and commenced with the conversion last July over our quiet winter period.

We carried out all the work ourselves

(D.I.Y. fools!) and although ready for cruising some 6 weeks later, it took a further 6 weeks before our state licensing body, Marine Board of Victoria, would approve it. We were the first commercially licensed electric passenger vessel in Victoria and possibly the largest in Australia and our Marine Board therefore had no regulations for solely battery powered electric boats.



We were, as they said, the "guinea pigs"!

Anyhow, we have come through 11 months of operation including the peak period of summer holidays and Easter which, with the extra cruises we ran, really tested the system out ... and we are very pleased with it.

The particulars of the equipment we are using are:

**Motor:** Baldor 72 volt 8hp DC series Traction Motor run at 48 volts

**Batteries:** One bank of 24 Century Yuasa VCI 6C 435 amp (5 hr) tubular plate, monoblock, lead acid 2 volt cells - placed centrally in the hull.

**Controller:** 48 volt, 350 amp Curtis Controller

**Chargers:** Two Control Technics 48 volt, 25 amp - each with a boost and float facility having overload, over volt lockout and DC fail shut-down features. The chargers are mounted in the bow and are connected in parallel until

gassing is reached when one charger automatically

switches off. A timer allows the remaining charger to operate until the batteries are fully charged.

We received little support but a lot of scepticism here in Australia. Especially from our government authority (inappropriately named "Energy Victoria") as they showed little interest in our conversion plans and even declared that electric power was more suited to twin

hulled boats carrying no more than 6 to 8 passengers! This was even more surprising given that we had provided them with details of the boats operating in the U.K. and particularly Venice where the water buses run carrying 200+ passengers.

Although we have not yet fully discharged the batteries, we have run continually for 6 hours at 5.2 knots and are expecting to obtain a minimum of 8 to 9 hours total cruise time. If we reduce speed to 4 knots, we expect to easily achieve 18 to 20

hours.

Running costs have been slashed. For example, in the 3 month period (November to January) diesel costs would be approximately A\$450 but electricity costs have been A\$120 (including the connection charge).

Our passengers have generally been in awe but soon have plenty of questions. They have expressed a real delight in cruising electric as well as noticing the benefits of reduced noise, fumes and vibration. And of course it is particularly suited to the environmental type cruises we run.

We would like to thank those members who gave freely of their time and knowledge to help us realise a dream and we extend an open invitation to cruise electric with us at some time in the future. Keep up the good work.

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Bob and Julie Whadcoat can be contacted at Lake Tyers Boat Trips, P O Box 730, Lakes Entrance, Vic 3909, Australia. (Fax: 00 61 51 554706).



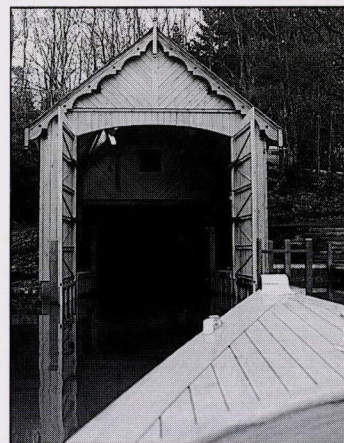


### A FITTING FINAL FLING!

**ORCHARD BELLE**, a new Frolic 31 built by the Steam & Electric Launch Co. for Mr Norman Stoller, MBE - whose new boathouse will be a fitting home for the elegant craft.

The last, but definitely not the least, boat to be sold by Hambleden Mill Marina and Gillian Nahum who, from this coming season, will no longer represent STELCO on the Thames. The end of a long and fruitful collaboration.

"Have no fear, though", says Gillian "the current will continue to flow down at Mill End!".



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