

ELECTRIC BOAT *News*

The Journal of the Electric Boat Association

Volume 7 Number 2 Summer 1994

ISSN 0969-031X



MEET THE PRESIDENT

SAILING WITHOUT SAILS

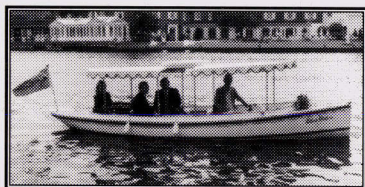
WINTER MEETING

**ELECTRIC BOATS - THE
FUTURE**



THE STEAM & ELECTRIC LAUNCH COMPANY

"Electric Boat Centre"



FROLIC 21'

Edwardian
style day
launch.

DELTIC 21'

Modern style
overnight
cruiser



Full range of electric launches ~
Visit our showrooms and ask for a
demonstration.

THE STEAM & ELECTRIC LAUNCH COMPANY

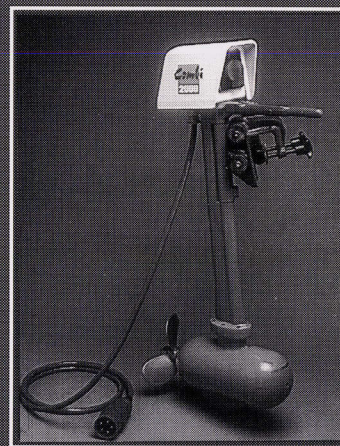
"Builders of Fine Electric Launches & Cruisers"

ST. GEORGE & DRAGON BOATHOUSE,
HENLEY ROAD, WARGRAVE, BERKS RG10 8HY
TEL: (0734) 402577 FAX: (0628) 890428

Portable Electric Power

Combi Electric Outboards and Saildrives

700 Watt to 4000 Watt



The Combi range are heavy-duty units, suitable for continuous main propulsion use. Either outboards, or pod-mounted saildrives. Many hundreds are already in use in Holland and throughout Europe, on private boats and hire craft.

**The Thames Electric Launch Company,
P O Box 3, Goring-on-Thames, Berkshire. RG8 0HS.
Tel: 0491 873126. Fax: 0491 872217**

SILENT RUNNING

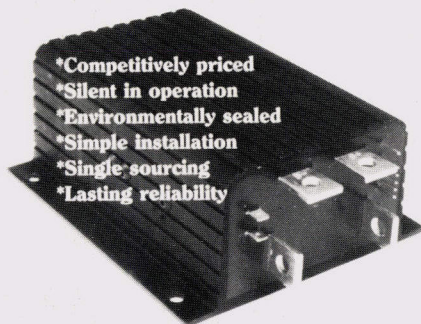


Speed Controllers from Curtis

*YOUR CAPTAIN'S CHOICE
FOR ELECTRIC LAUNCHES AND NARROW BOATS*

**From 125 Amps to 600 Amps
From 24V to 120V**

*ON THE GRAND UNION CANAL
OR THE NORFOLK BROADS*



- *Competitively priced
- *Silent in operation
- *Environmentally sealed
- *Simple installation
- *Single sourcing
- *Lasting reliability

CURTIS

WORLD LEADERS IN DC MOTOR
SPEED CONTROLLERS

Curtis Instruments (U.K.) Ltd., 51 Grafton Street, Northampton
NN1 2NT. Tel: (0604) 29755. Telefax: (0604) 29876

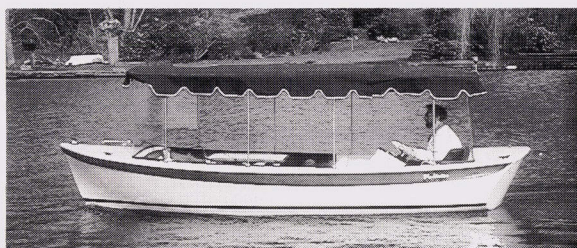


Specialists in MARINE ELECTRIC POWER

With a variety of monoblocs and traction cells we can provide you with whatever electric power you need to drive your boat majestically through the water. We can also provide you with a charger as a package deal.

**For further details:
Oldham Crompton Batteries Ltd.
Edward Street, Denton, Manchester M34 3AT.
Tel: 061-335 0999. Fax: 061-335 0020.**

*The wind in the willows . . .
is all you will hear*



Voltaire 18

*The perfect electric launch
for rivers and lakes
Up to 8 hours cruising on one charge
Seats 8 adults comfortably
Easily towed behind a family car*

The Thames Electric Launch Company
PO Box 3
Goring-on-Thames
Reading RG8 0HQ
Tel: 0491 873126 Fax: 0491 872217

EBA CALENDAR 1994

Some of the events of 1994 which may be of interest to EBA members. The EBA may be present at some of the events, perhaps with its own stand.

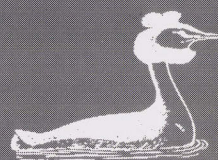
MAY	19-22	Inland Waterways Boat Show, Nottingham
MAY	22	Ipswich "Environment Day"
MAY	28-30	IWA Trailboat Rally, Grantham
JUNE	12	Seventh Wargrave Electric Boat Rally (just above Hambleden Mill)
JULY	10	Treasure Hunt and Pub Lunch at the Flower Pot, Aston
AUGUST	13-14	Thames Traditional Boat Rally, Henley-on-Thames
AUGUST	27-29	IWA National Waterways Festival, Waltham Abbey
SEPTEMBER	3	Cookham Regatta. Parade of Boats
SEPTEMBER	17-25	Southampton Boat Show

Notice of other events to Edward Hawthorne 0628 521606

Please note that the Treasure Hunt will now be held on Sunday 10 July. Meet at the 'Flower Pot', Aston (just below Hambleden Lock) at 12 noon.

SPONSORS

Electric Boat News
has been published
thanks to generous
sponsorship from
Eastern Electricity.



E. C. CONNECTORS CO. LTD.
PEGASUS WORKS,
329 FRONT LANE,
UPMINSTER, ESSEX RM14 1LW.
Tel: (04022) 24323.
Fax: (04022) 21191.

E. C. CONNECTORS CO. LTD.
6 HAINGE ROAD,
TIVIDALE, WARLEY,
WEST MIDLANDS B69 2NB.
Tel: 021 522 4112.
Fax: 021 522 4174.

ELECTRONIC CONTROL SYSTEMS

**ELECTRONIC CONTROL EQUIPMENT FOR:
ELECTRIC BOATS, MINING LOCO'S, FORK-
TRUCKS, MILKFLOATS AND ALL D.C. POWERED
ELECTRIC VEHICLES.**

AGENTS FOR:

SEVCON TECH/OPS LTD., ANDERSON POWER PRODUCTS
(Battery Connectors), REMA BATTERY CONNECTORS.

REPAIRS TO CONTROL EQUIPMENT CARRIED OUT IN OUR
OWN FACTORIES INCLUDING:

SEVCON, CABLEFORM, GENERAL ELECTRIC and
LANSING BAGNALL.



CASTLE NARROW BOATS
USE SEVCON ELECTRONIC
CONTROLLERS—
Supplied by COLTON

Electric Boat News is published quarterly by the
Electric Boat Association.

No material from it may be reproduced or reprinted without permission. Whilst we take every care to ensure the accuracy of the contents, the EBA cannot be held responsible for any errors which may occur, or for any actions that might be taken as a result of this material. Also, views expressed in the magazine are not necessarily those of the EBA.

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.

Printed by: Headley Brothers,
The Invicta Press, Queens Road, Ashford, Kent.

The Journal of the Electric Boat Association

Volume 7 No. 2 Summer 1994

Editor: Roy Devereux, 50 Upper Park Road, Camberley, Surrey, GU15 2EE (Phone/Fax: 0276 63009)

Chairman: Gillian Nahum, Mill House, Mill End, Henley-on-Thames, Oxon, RG9 3AY

Secretary: Vacant

Treasurer/Membership Secretary: Fraser Brown, Mouse Hole, Abbey Road, Knaresborough, HG5 8HX

Users' Group Chairman: Edward Hawthorne, Waters Edge, Riversdale, Bourne End, Bucks, SL8 5EB

*Cover pictures: Celandine passes King's College on the Cam. (Photo: Geoff Robinson/ Manni Masons Pictures)
EBA President Rear Admiral Gick at Bosham Hoe*

The Chairman writes ...

Dear Members,

At last the boating season is upon us. *Miller's Lass* enjoyed the beautiful May Bank Holiday weekend rediscovering our local backwaters of which neither we, nor the kingfishers, nor the nesting coots ever seem to tire.

My enthusiasm is continually fuelled as news of new electric boats comes flooding in to Mill House HQ, some built from new designs by previously sceptical companies which have been converted to 'the cause', others heading off in great numbers to burgeoning European markets. The latter gives me particular personal pleasure as one of my crusades when I was active with the Steam & Electric Launch Company was to open up foreign markets with specifically designed boats such as the *Deltic*.

Closer to home, indeed at the end of my garden, the NRA now operates *Lambourn*, it's hybrid patrol launch whilst NRA chief John Redmond promises me that 'blue sockets' will shortly proliferate at every third lock.

Hence, as I return to the back benches of electric boating as the longest serving committee member and relinquish the hot seat to Phil Horsley, I hope you will join me in wishing him a successful and enjoyable chairmanship. Please continue to offer Phil and our committee your enthusiastic support.

I hope to see many of you at our summer events. In the meantime have a wonderful summer of peaceful boating.

Gillian Nahum

From the editor's desk ...

There have been a number of interesting and important events on the electric boating scene since our last issue - and I thought this was the close season!

First, the EBA held a very successful Winter Meeting in February (reported on page 5) where over 40 members enjoyed an excellent buffet and heard some authoritative speakers. Thank you to all the many people who contributed to the success of the evening.

Then, in May, several EBA committee members attended a seminar at Norwich co-hosted by Eastern Electricity and the Broads Authority. We report the event on page 6. That meeting will surely give a great boost to electric boating on the Broads. We also heard whispers there that agreement between the navigation authorities is near on a standard for recharging points and that consequently it should soon be possible to plan extended e-boat cruises on the Thames.

At the EBA committee meeting on 3rd May, the Treasurer reported that the Association's finances are in good health. Any member who would like to promote the EBA at local events or shows can not only use the Association's display boards but could also apply to the Treasurer for financial help.

At that meeting Gillian Nahum stepped down from the chair and Phil Horsley was elected to succeed her. Phil will be the first to agree that he has a hard act to follow. Gillian remains on the committee so, thankfully, we will not lose her enthusiasm, energy and wide inside knowledge of the electric boating world. The whole Association will want to thank her for her dynamic leadership during her period in office.

Roy Devereux

REWARD

Bright spark wanted

The Association needs a new secretary. The job involves dealing with correspondence, answering queries and taking minutes of committee meetings. It should not take more than a few hours a week. An honorarium will be paid.

If you are interested, please contact Gillian Nahum at the address shown above.

MEET THE PRESIDENT ...

One summer in the late '60s, Percy Gick and his wife hired a boat on the Llangollen canal. The scenery was wonderful but they hated the diesel engine's thump, its noise, its smell and the oily discharge it left on the water. "It quite spoiled the holiday", he says. "I thought there had to be a quieter and cleaner way. I started to think about electric motors - if they could propel a milk float, surely they could propel a boat".

So he experimented with electric motors in his boatyard workboats. It was clear that electric propulsion was perfectly feasible for dayboats, but Percy wanted to *cruise* in an electric boat.

So he built one.

With the help of Don Gribble of the Lead Development Association and the Electricity Council, he fitted out a standard 23' Trentcraft cruiser with an electric motor made for the Enfield car, called her *Electra of Emsworth* and took her on a 600-mile cruise from the Thames to Manchester and back.

Percy Gick - or, to be more formal - Rear Admiral Percy D Gick CB OBE DSC, is now the President of the Electric Boat Association.

Indeed, he was the founder president. He and Lord St Davids, in association with the LDA, laid the foundations of the Association in the late 1970s at an inaugural meeting in the House of Lords. Shortly afterwards, "to give my approaches to MPs and others a bit of weight", he says, Percy was given the title of President of the Association.

One of his first initiatives in that office was to try to interest the Duke of Edinburgh in electric boats. He arranged to ferry Prince Philip around the Solent one Cowes Week and told him that *Brittania's* barge should be powered by diesel electric. Prince Philip, it appears, saw the

advantages but doubted if anyone would come up with the money. "A pity. It would have been a great boost for electric boating", Percy says.

Rear Admiral Gick retired from the Royal Navy in 1964 after a distinguished career as a Fleet Air Arm pilot. He trained on Tiger Moths in the '30s and flew Swordfish in World War 2. He was still flying at the age of 51. When he left the navy he bought a boatyard in Emsworth. "I made my hobby my profession", he says. The yard was sold only four years ago.

I wanted to know more about the record-setting 600-mile cruise in 1978. Where did he find charging points? "Oh, anywhere", he says, "boatyards, pubs ... even a private house once". Blazing a trail through the Midlands, they would just roll up with a 13 amp plug and a length of cable. "People were delighted to let us plug in overnight". Arriving at a pub, Percy would say "I want a pint and some electricity". ("Which first?", asked one landlord). "Some astute waterside publicans,

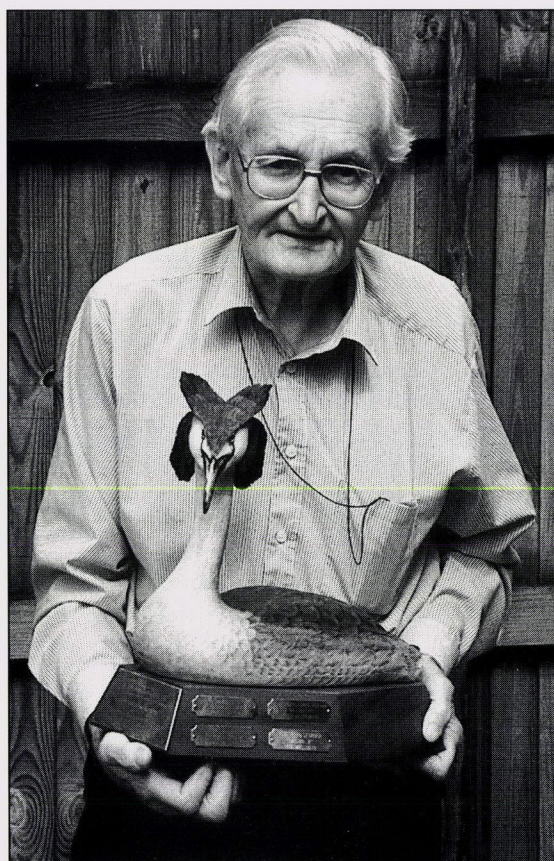
eager to attract new customers, were soon sold on the idea of installing recharging points".

To commemorate that voyage, Percy put up the Emsworth Trophy - a beautifully carved great crested grebe - for the longest electric cruise (won most recently by Hans Aysee - see page 4 - and pictured below).

More recently, at the invitation of Lord Avon, Percy fitted out a new 25' hull, powered it with a 4Kw Austrian-manufactured outboard and took it to the Midlands to mark the opening of the "Avon Ring". *Patricia* subsequently appeared at the Boat Show and a retired naval officer bought her to run business lunch parties.

Rear Admiral Gick now lives in retirement on the edge of Chichester Harbour at Bosham. Sadly, his wife Aylmer, who had been with him in electric boating from the start, died only last year. Needless to say, Percy still has an electric boat - a 23' Drascombe Coaster with what one can only call a '*Gick*' electric outboard: a Seagull leg with a Lynch disc motor fitted in place of the discarded petrol engine.

What will he think of next?



THE EMSWORTH TROPHY

Past winners

1989 Viscount St. Davids in *Silver Sail*, covering 411 miles.

1990 Fiona, Dowager Countess of Arran in *An Stradag* capturing the World Speed Record of 81.8 Km/Hr (50.825 mph).

1991 Fraser Brown in his 30ft narrowboat *Lucy* covering 195 miles.

1992 Paul Wagstaffe in his 30ft launch *Wagtail V*.

1993 Hans Aysee in his *Ilse F* for travelling 465 miles through the Dutch waterways.

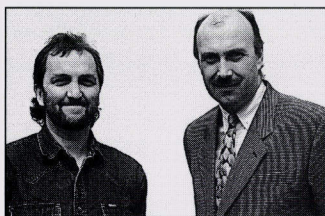


... and ALL THE PRESIDENT'S MEN

Gillian Nahum has been the chairman of the EBA for the last two years. By profession she is a translator but she is best known in the boating world for the years when she represented the Steam & Electric Launch Co. She has been a member of the EBA for some seven years and has been on the committee from the start. She lives at Hambleden Mill Marina - where she still "helps out" - and where she keeps her own electric canoe, *Miller's Lass*.

Edward Hawthorne is the Chairman of the Committee's 'User Group', representing private owners. He is a long-standing member of the Association - dating back to 1983 - and has been on the committee since 1990. Edward and Dinnie Hawthorne's two electric boats were profiled in the *EB News* last year. They have been 'electric boating' since Dinnie acquired her 'shopping boat' in 1976.

Fraser Brown is the Association's Treasurer. By profession a Director of an agency training teachers in child development, he joined the EBA 5 years ago and has been on the committee for 4 years. In 1991 he won the Emsworth trophy for a 15-day, 195-mile cruise in his electric boat Lucy from the Regents Canal to the River Trent. His special interest on the committee is the promotional aspects of the Association's work.

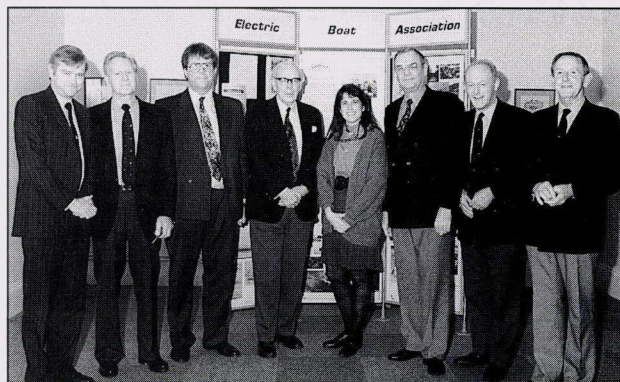


Fraser Brown and Stephen Thackray

Roy Devereux is the editor of *Electric Boat News* - an ex officio member of the committee. He is a freelance writer and editor, specialising in the boating press.

Phil Horsley, a trade member of the committee for 3 years, is the Sales Manager O.E. National Accounts of Chloride Motive Power Batteries Ltd - Europe's largest battery company. His particular interest is to develop and nurture electric boating and to make boat enthusiasts aware that the system is viable. At the last committee meeting he was elected to the chair.

Denis Tye, a 'user' member of the committee for some two years, is particularly interested in encouraging the installation of more charging points by the NRA. Denis' 21' Deltic Weekender cruiser (his second electric boat) is moored outside his home on the Thames at Marlow. He uses it mostly for day trips but looks forward to taking longer trips when more charging points are available.



L to r: Paul Wagstaffe, Denis Tye, Phil Horsley, Edward Hawthorne, Gillian Nahum, John Gardner, Simon Davis, Roy Devereux ... at the EBA Winter Meeting on 15 February 1994.

John Gardner is an electrical engineer. He has been a member of the EBA for six years and an industry member of the committee for the same period. John sees the EBA as part of the overall drive towards zero emission vehicles. He recently retired from Benning UK, the battery charger manufacturers. The charging point developed by Benning UK Ltd for the Broads was described in our January 1993 issue.

Stephen Thackray is the UK Sales and Marketing Manager of Maréchal, the manufacturers of industrial plugs and sockets. His company's plugs and sockets were used in the charging points installed by Eastern Electricity on the Broads and have been specified by British Waterways for several years. The company's prime concern is to make the devices safe for inexperienced users and to ensure as far as possible that waterside installations can only be used for recharging boat batteries.

Paul Wagstaffe bridges the gap between industry and private members. He is the enthusiastic private owner of Wagtail V, profiled in our Summer 1993 issue, and is by profession the Executive Director of the British Marine Industries Federation (BMIF). He has been a member of the EBA for 8 years and a member of the committee for 6 years. His interest in electric boating was originally sparked off by no less a figure than our President, Rear Admiral Gick, so it was appropriate that Paul and his wife Pat should win the Emsworth Trophy in 1992.

Simon Davis, a Company Director, is a 'user' member of the committee but, he says, the three electric boats in his family actually belong to his wife Pat. They cruise on the Thames between Windsor and Marlow and one of Simon's happiest memories is of taking his 90-year-old mother out from the 'Compleat Angler' for her last trip on the river. The story of Pat and Simon's *Celandine* fleet is told elsewhere in this issue.

SAILING WITHOUT SAILS

Hans Asyee, Chairman of the Stichting Electrisc Varen, has sent a most entertaining account of the long distance cruise for which he won the Emsworth Trophy last year. "Sailing without sails", he calls it - the sensation of silently riding the wind and the waves through the lakes, rivers and canals of the Netherlands. Sadly, we only have space for excerpts.



The trip was certainly an experience. Never before had we negotiated rivers in a 19' open boat. We wondered how our electrical system would stand up under as yet unknown tricky circumstances. But after we had managed the

river Rhine upstream, the Ijssel downstream and inland waters in conditions up to Force 7, the latter question needed no more asking. The Ecoboat twin engine, including the Varta battery set, performed in exemplary fashion under all conditions.

We had no idea if electricity would be available, nor when and where we would need it. In fact, most yacht harbours we visited did offer us all we needed. In three cases the power supply was only 4 amps, too low for charging our batteries, but invariably the harbourmaster bailed us out. Occasionally power was controlled by slot machines requiring coins. That caused some minor problems, not knowing how many kWh would become available, nor estimating precisely how many kWh would be needed. But in general battery charging did not cause a real problem when mooring in yacht harbours - and there were plenty of these.

In Sloten, where we stayed overnight in a guest house, our sloop was charged from a point in our room on the second floor! At the 'Yachtclub de Lek', the harbourmaster welcomed us enthusiastically as his first electrical guests and charged the batteries for free.

Continuing along the Lek and the Rhine turned out to be easier than we had thought. Admittedly, because of low water level some barrages had been raised. Thus we took extra time passing

the locks but the counter current was less strong and we could easily maintain our cruising speed of 5 mph without consuming excessive power. Each day we travelled 5 to 7 hours, draining about half the battery charge.

At Ossenzijl we moored next to a number of electric charter boats, called the "Whispering Fleet" in the backyard of our hotel. Experience with these charter boats shows proper security devices are required to cope with improper handling by the layman, like by-passing the cut-out in trying to get a blocked propeller started instead of removing the obstruction.

On the return journey we arrived at Giethoorn, "the Venice of the Netherlands", a must for every skipper of an electric boat as here lies an experience of over 20 years experimenting with electric propulsion. Moreover, the local authorities here have decided to ban all powerboats in the area unless they are electrically propelled.

In summary, we can confirm that electric boating in the Netherlands is not confined to short day trips. There are hardly any limitations in planning your route.

Hans and Betty cruised in their 19' Danish sloop "Ilse F". They covered 465 miles, using the motor for 103 hours. The length of charging cable required varied between 15' and 220'. The estimated energy use was 108 kWh, averaging 0.23 kWh per mile. Worth winners indeed of the Emsworth Trophy!

News from the USA

From his hideout in Florida, our Ex-Pat member Derek Chamberlain reports ...

I have now obtained the details of the record run of 136 miles in a 20ft canoe by Bob Glasemann and Bud Roberts, aided by solar panels and loaded with hundreds of pounds of camping and personal gear. Their journey started at Flamingo at the southern end of the Florida Everglades National Park on 5th February, and ended on 10th February at Sanibel Island, near Fort Myers in Florida.

The fibreglass boat, built by Bud Roberts of Athens, Tennessee, carried four 50 watt photovoltaic panels and one 25 watt panel, all manufactured by Photocomm of California. The motor was a Minnkota 112 TurboPro. Six 12 volt batteries were provided by GNB. The canoe's beam is 4ft and the draft 6 ins. The photovoltaics constantly recharged the batteries, which were set up in three separate banks to provide energy to power the vessel. The boat cruised at just under 3 mph.

Roberts was accompanied by Robert Glasemann, President of R&L Marine, producer of the Whisper 10, from Altamonte Springs, Florida. The two men met at the Charleston Maritime Festival last September. (See last issue of *EB News*). They stated that they could have gone much further, and the possibilities are unlimited.





WINTER MEETING 15th February 1994



Members meet over the quiz ...

Edward Hawthorne writes:

The Winter meeting of the Association was very well attended. Held at Cookham Parish Centre, members met over a hot buffet supper to exchange news and views on what's new in electric boating and to see slides of new boats from the UK, Europe and the USA.

Derek Chamberlain had represented the EBA at the recent Charleston Maritime Festival where the American electric boating industry was exhibiting for the first time. Having lectured there about the UK industry he showed us pictures of the latest American boats. Comparing progress in the two countries, he felt that conditions in the UK

and Europe had put us ahead although he noted that both countries were exporting.

Paul Wagstaffe brought us up to date with progress in Holland, Switzerland and the UK. The Dutch are introducing electric waterbuses and some city councils are considering making electric boats compulsory. Two or three compa-

nies are introducing new boats. Hans Asyee provided a number of pictures of his trophy-winning trip through the Dutch canals.

The Swiss have concentrated on solar-driven craft. Paul showed several pictures of races held on the Swiss and Italian lakes. The craft ranged from canoes running solely on solar power to 32 ft. electric cruisers using solar power as a top-up to extend range. Competitors came from Germany, Italy and Switzerland. One boat was Theo Schmidt's portable two-seater catamaran which has visited a number of countries including the Isle of Wight, where some fine days produced plenty of sunlight to power the craft.

In the UK, boatbuilders are making major steps forward in producing electric cruisers for the hire and private market, the latest being the 22 and 28ft ECO built by the Steam & Electric Launch Co. (featured in the last issue of *E B News*).



... and enjoy the buffet.

They could have made the journey with 600 lbs of batteries alone but did it with 300 lbs of batteries and 60 lbs of photovoltaic equipment. This not only made a tremendous reduction in weight but left space for camping gear and food. They saw a great variety of birds and wildlife, including deer and alligators, and even had some of their food stolen by raccoons during the night. The boat was crowded but reasonably comfortable. A dual-helm steering arrangement made it possible for either of the men - one in the bow, the other in the stern - to steer the canoe without changing the seating arrangement.

There have been four unsuccessful attempts in the USA to beat the Countess of Arran's 51 mph world speed record for an electric boat. The first two were during last October at Devil's Lake, Oregon, by Burton Gabriel. On his first run the boat flipped in the air and sank. The motor was drained and put back in service and another attempt was made when he managed 41 mph into a 10 knot headwind. On the return trip the controller failed as he was approaching the record. On one more run he was forced off course when he ran into the wash of another boat.

Others who have attempted the record are Fred Saxby and Dave Cloud. Saxby experienced an overheated resistor coil which melted and started a fire on the boat, with no serious damage. Cloud's boat hit speeds estimated to be up to 50 mph but failed to complete both runs. Despite these problems these men are confident that they can take the world record in their largely home built boats in the near future.

Picture (opposite) shows Bob Glasemann en route upriver.

"ELECTRIC BOATS - THE FUTURE"

Seminar organised by Eastern Electricity plc and the Broads Authority

Over one hundred boat builders attended a seminar on the future of electric boating on the Broads co-hosted by Eastern Electricity and the Broads Authority at Dunston Hall, Norwich on May 4th.

Mike Cooper-Read, Eastern Electricity's Environment Business Manager, commented afterwards: *"There is now a general acceptance amongst boatbuilders that electric boats will be a prominent feature on the Broads in the future. Their increased use will protect and improve the environment."*

In the three years since we held the first seminar there has been considerable progress in the technology and knowledge of electric boating. There are now a number of options, including the diesel-electric hybrid drive system adopted by the National Rivers Authority in their patrol launch on the Thames. None of these options should be discounted in arriving at the best solution for a particular boat.

Eastern Electricity has designed and installed a network of seven charging points on the Northern Broads. This should enable up to 20 boats to recharge their batteries during a week's cruising.

One of the most exciting pointers to the future of electric boating on the Broads is the announcement that one of the largest Broads operators, Len Funnell of Broads Tours, Wroxham, is building a 33ft state-of-the-art family cruiser with an ECO hull design.

We need to achieve the right level of support for electric boating through innovative thinking but the prospects for its future - and consequently for an improved protection of the environment - are now very promising."



The Forum answers questions from the floor. L to r: Richard Fletcher, Emrhys Barrell, Aitken Clark, Mike Cooper-Read, Gillian Nahum, Phil Horsley, Geoffrey Morter, Peter Howe, Paul Wagstaffe.

The programme:

a.m.

Welcome and Introduction :	Mike Cooper Read, Eastern Electricity*
Quiet Enjoyment :	Aitken Clark, Chief Executive, Broads Authority.
Developments in Design:	Geoff Morter, Director, Reachlog Ltd.
Electric Cruising on the Broads:	Paul Wagstaffe*, B.M.I.F.
Running a Weekly Hire Yacht:	Peter Howe*, Camelot Craft.
Advances in Batteries:	Phil Horsley*, Chloride Motive Power.
Designing an Electric Drive:	Richard Fletcher*, The Lynch Motor Co.
The Thames Hybrid System:	Emrhys Barrell*, The Thames Electric Launch Co

p.m.

Forum chaired by Gillian Nahum*, Electric Boat Association.

* Members of the EBA

Some of the questions at the Forum ...

...is slopping electrolyte a problem in a heeling yacht?

...how important is propeller design in the performance of electric boats?

...could packs of ready-charged batteries at boatyards be an alternative to installing charging points?

...what are the prospects of Eastern Electricity installing charging points on the Southern Broads?

...why don't boatyards - or hotels and restaurants - consider installing charging points themselves in the Southern Broads?

...are there legal problems if boatyards want to charge a premium on electricity supplies? ...are the on-board battery chargers audible at night?

...should Broads hire dayboats be restricted to electric only?

...what about having windmills to generate the electricity for the charging points? - or what about "windmills" on the boats themselves? ...

... and many more!



Peter Howe's ELECTRIC EXPERIENCE

In a recent issue, Electric Boat News told the story of "Electric Excalibur", Camelot Craft's electric-powered hire yacht on the Broads. One year on, we spoke to owner Peter Howe again for an up-to-date report. Here is his story.

During the winter of 1992, I carried out a conversion to one of the yachts in my small fleet of Norfolk Broads hire boats, fitting a battery-powered electric drive in place of a Volvo diesel engine. I decided to do this conversion after hearing of the advantages of such a system at a seminar held by Eastern Electricity to publicise their network of charging points.

The design of the new drive was carried out by London Innovation and it incorporated the very latest in motor technology using a lightweight, permanent magnet motor which has been especially developed for electric vehicle and marine applications. The motor operates at just twelve volts, driving a 17in diameter folding propeller at about 400 rpm to give a top speed of 4 mph - within the new speed limits for much of the Broads area. The battery pack consists of six heavy-duty industrial batteries which will run the yacht for over 12 hours as well as supply all the lighting and other electrical equipment. Finally, there is an on-board charger which allows the boat to be connected to a shore-based 240 volt supply for charging and it is equipped with a plug which is compatible with the Eastern Electricity charging points.

The new drive has many advantages over a diesel engine, the most obvious being the totally silent operation which perfectly compliments the sailing attributes of the yacht. There are, of course, no exhaust fumes, smoke or smell of any kind and no diesel or oil to

be spilt in the river. And the power unit can be started instantly and reliably at the throw of a switch.

The yacht, which is a Pegasus 800, was on hire through the 1993 summer season and all our customers were delighted with the performance. Some were a little wary at first, maybe a bit concerned about running the batteries

to Salhouse. The sun's warmth was just speckling through the trees and I could hear all the birds singing along the river, the silence being disturbed only by the occasional early-rising cruiser that rumbled from the distance and throbbed past, then leaving the river quiet again as I whispered on my way.

I am disappointed that there has not been more interest from other boat builders in the area about this exciting development. There are still some technical improvements that can be made, but nevertheless the system is so ideally suited to the requirements of a yacht auxiliary that I really think an opportunity to reduce pollution in the Broads area is being missed. I have been so pleased with this first yacht that I am fitting out a second this winter. It is a gaff rigged traditional Broads style boat and I think that the electric drive will be even more appropriate for her.

Of course, the Broads Authority have given support to the development of electric boats in their new draft plan. I also believe that they are very seriously considering fitting a dual power package - electric with diesel back-up - into a new patrol launch this year.

I would like to encourage much more interest in the technology and if anyone would like to know more, I would be very pleased to show them our yacht and to take them out on a demonstration run. I would also be very happy to advise if anyone has a yacht or cruiser which they would like to consider converting. A 'package conversion' is available from London Innovation to suit many boats.



Peter Howe at the tiller of George Thetford, the second electric yacht in his hire fleet.

flat, but when they returned from the week's holiday they were all very enthusiastic. We found that the cruising range of over 12 hours was in fact sufficient for a complete week's motor-ing for many of our customers and for those that used the engine more frequently, it was still only necessary to have one mid-week charge. The position of the charging points is very convenient, the one at the top of Hickling Broad being a favourite.

I found the boat a delight to run under engine and I remember on one perfect summer morning before 8.0 o'clock motoring down from Wroxham

In April 1992, Peter Howe turned his back on 30 years as an engineer and with his wife Alex, launched into a new venture. Thus did Camelot Craft come into being. "George Thetford" ("George" to her friends, says Peter) is named after a local boating personality. 25' LOA, beam 8'3" with inboard electric engine, she sleeps 2 to 3. She has full 6' standing headroom in the cabin without a lifting roof. Further details can be obtained from Camelot Craft, The Rhond, Hoveton, Wroxham, Norfolk NR12 8UD. Phone: 0603 783096. Peter Howe is a member of the EBA.

My Darling Celandine

Extract from a report in the Daily Telegraph, 23rd October 1993: "After years of punt-powered traffic, one of Britain's best-known stretches of river is to be opened up to a motorised sightseeing vessel for the first time next month.

Cambridge sightseers will be able to take a 40-minute guided tour of the University "Backs" in the *Celandine*, a 10-seat launch powered by a small electric motor. Special permission has been granted on the grounds that the vessel causes no pollution and cannot disturb students in riverside colleges".

The owner and operator of *Celandine* is Pat Davis, wife of EBA Committee member, Simon. EBA News asked them about the 'Celandine Line'. Simon (owner and operator of the diesel hire launch 'Nada') writes:

You asked us to let you have some background to Pat's 'Celandine Line' fleet. The history goes a bit like this.

She was wooed from the noisy and somewhat smelly *Nada* to electric boats during the course of a trip with Marjorie and John Turk in *Arona* after the first Cookham Regatta. She hankered after one of these boats for some time and then, following a legacy from a favourite aunt, she bought *Celandine* from Bob Chase at Guildford Boathouses.

This delightful little launch was happily moored at Cookham until one day there was a clarion call from Monkey Island Hotel because some clients wanted a self-drive boat that evening. Chaos ensued with the marketing business but the result was that the clients were not disappointed and she delivered a boat

to Monkey Island in time. This was so successful that she was persuaded by the management to leave the boat there where it has been constantly used ever since.

As there was now no boat at Cookham, she decided to replace *Celandine* for the family use as we all so enjoyed electric boating. No sooner had she organised this than the second *Celandine* was pressed into service at Oakley Court. Now she was in full competition with the elegantly skip-

pered *Nada*. The battle has raged (in a very friendly way) ever since between the Celandine Line and Classic Cruises of Cookham!

The next excitement was that it was discovered by Edward Hawthorne that



Pat Davis in *Oakley Belle*.

Photo: Maidenhead Advertiser.

there was an electric boat at Oakley Court in 1904 owned by the Avery family called the *Oakley Belle*. What then happened was that Pat's boat at Oakley Court went back to Cookham and was replaced by an addition to the fleet which was aptly named the *Oakley Belle*.

Many things have occurred during the last two years. *Celandine* found itself on the road outside the Windsor Theatre for a promotional exercise with *Sleeping Beauty*, the Mayor of Windsor

& Maidenhead and several other dignitaries. The stream was too great to use the river so the mountain went to Mohammed.

Pat also won an Environmental Award, presented to her by the Lord Lieutenant of Berkshire, for operating an environmentally friendly business.

The next step was to put *Celandine* on the Cam once the punts ceased to operate up and down the Backs in November. This was the first time that a launch had been allowed on the Cam by the Conservators and this was only permitted because it was electric. At the launch when the tape was cut there were television crews, radio commentators and reporters from local and national newspapers. Indeed, the Daily Telegraph carried a picture on the news page and both local television stations carried the story on their news programmes.

Celandine has been much in evidence at Cookham Regatta which was started by Pat and Simon six years ago and they have run the Regatta office and Friends of the Regatta ever since. For the first five years they always led the parade of traditional boats in Simon's 2ft Thames racing punt and recently one of the Celandine fleet has taken part with the electric boats. Every year Pat can be found booking in the crews at the start, always assisted by her colleagues from

the Cookham Medical Centre.

The Celandine Line provides cruises for hundreds of people each year who are seeing electric boats for the first time. Passengers come from far and wide both from this country and abroad and really enjoy being on a silent boat, driving themselves and seeing the river and its environs for the first time. It is always a source of wonder.

Pat and Simon love providing boats for wedding couples taking them either to or from their wedding receptions at Monkey Island, Oakley Court, Queen's Eyot or Bray - to name but a few.

Pat's three boats are all Frolic 21s, from the Steam & Electric Launch Co.

IN THE NEWS

Since our last issue, we have picked up several references to electric boating in other journals. In the February edition of *Canal & Riverboat* their columnist "Tillerman" asked 'Whatever happened to the growth of electric boats?' 'What happened to the much-publicised idea of cruising rings with strategically placed charging points?' Our Chairman Gillian soon wrote and told him! He should have been at the Norwich seminar.

Then, the April edition of *Waterways World* carried a double page comparative test of two electric outboards, the MotorGuide Stealth and the MinnKota. The writer, Jon Sims, tried them both on his 16ft rowing boat and came away saying that he has "been converted to DC".

From further afield came a cutting from the *Sidney Telegraph*, sent to me by Brian Roden of the EVA. "For years dogs have been trained to find everything from drugs to mushrooms. Now the people of Finland have gone one step further, giving water-borne hounds their own boats and sending them out to find drowned swimmers. It is hoped that the barkers barques, equipped with electric motors (because petrol-driven outboard motors weaken the sense of smell) will cut recovery times".

Several publications, including *Motorboats Monthly*, *Motor Boat & Yachting*, *Workboat International*, and *Practical Boat Owner* carried news items or features on Emrhys Barrell's conversion of the NRA Thames launch *Lambourn* (see *EB News*, Autumn 1993).

NICE TO HEAR FROM YOU...

Thanks to all the people who responded to my invitation to send articles, thoughts, problems, pictures or whatever to *Electric Boat News*.

One of the first to arrive was a request for technical assistance from Graeme Ferguson who wants to take a solar powered electric boat back to Central Africa for game viewing and fishing. Then we had a letter from Mr Tolliday of Castle Narrowboats, Gilwern, Gwent, saying that as they are probably the only operators of electrically powered all steel narrowboats, they had been interested in the article about the ELEKTRA diesel-electric power and propulsion system reviewed in our last issue. We were very happy to put them in touch with HFL Industrial and Marine Power Ltd. SEEBOARD wrote a friendly letter telling me they have a Frolic 21 which they use throughout their region to promote the cause of electric boating and Viking Cruisers sent me some pictures of their new *Slipstream* cruiser (reviewed at Earl's Court) on the water at a recent demonstration weekend.

Finally, our Chairman has received a formal letter telling us that the Lake District National Park Local Plan - 'Deposit Version' - has now been published. This, it appears, contains detailed policies and proposals for guiding their development control decisions up to the year 2004. The EBA would like to hear from any Cumbrian resident who has had access to this plan. What are its implications for the future of boating on the lakes?



DUFFIELD ELECTRIC BOAT CO.
Worldwide Manufacturers of the Voltaire & Duffy
1-800-645-1044

USE OUR CRAFT TO POWER YOURS

Chloride Motive Power batteries and chargers. The ultimate in clean, quiet power for dependable performance in electric boats. The combination of traditional skills, advanced technology and unrivalled support services that have made Chloride Motive Power No 1 in Europe. The perfect choice for every boat afloat.

**CHLORIDE
MOTIVE POWER**

Batteries • Chargers • Service

CMP Batteries Ltd (Sales Dept), Salford Road, Over Hulton, Bolton BL5 1DD
Telephone: 0204 641111 Fax: 0204 62981

DEPENDABLE POWER FOR A WORLD ON THE MOVE