

ELECTRIC BOAT *News*

The Journal of the Electric Boat Association

Volume 10 Number 1 Spring 1997

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**E.B.A. ANNUAL REPORT
CROSS-CHANNEL CHALLENGE
EARLS COURT '97
THAMES CHARGING POINTS
E.B.A. of AMERICA**



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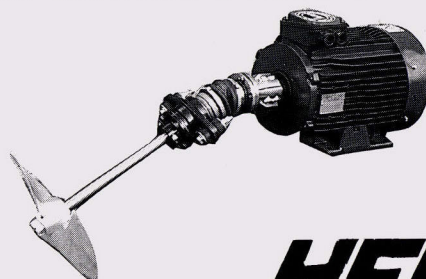
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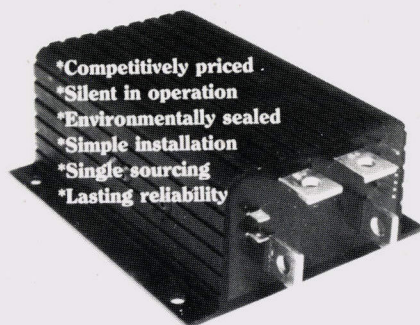


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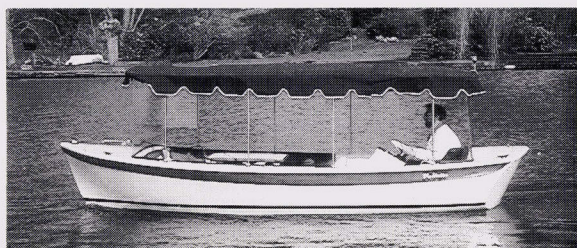
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EBA CALENDAR 1997

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

1997

Wargrave Rally—date to be confirmed.

JUNE 7 1997 General Meeting of the EBA, Upper Thames Sailing Club, Bourne End, Bucks.

JUNE 28 Reading Water Fest (see page 7).

JULY 19-20 Thames Traditional Boat Rally, Henley.

AUG 22-25 National Waterways Festival & Inland Boat Show, Henley-on-Thames.

AUG 30 Cookham Regatta.

SEPT 5-7 Boating for the Future, Conference & Exhibition, Wroxham.

SEPT 13-21 Southampton Boat Show.

SEPT Silent Sensations.

OCT Laying-Up Supper.

1998

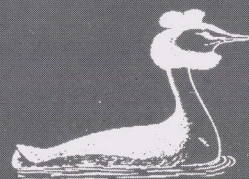
JAN London Boat Show.

FEB National Boat, Caravan & Leisure Show, Birmingham.

For further details of any of the above, or notice of other events, please contact the Secretary.

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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 10 No. 1 Spring 1997

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Cover pictures: *Main picture: The new Haines 29 electric cruiser "Evolution" (Story on page 8).*

Smaller picture: The River Stour Trust's Frolic 21, named "Stour Trusty II" by their President, John Constable, at Flatford Lock last year.

THE EBA CROSS-CHANNEL VOLTA CHALLENGE

On 13th September 1886, an electric boat, the *Volta*, made a return crossing of the English Channel between Dover and Calais on a single charge of her batteries. The trip was completed in 8 hours and 5 minutes.

No battery-powered electric boat has made this double crossing since.

We know that there are some British electric boaters interested in challenging this record, but we also hear that two cross-channel attempts are to be made later this year from the Continent. Stefan Sachs, a German member of the EBA, and Professor Bouly of France are each planning to make a crossing using solar-powered boats. It was also reported in the Dutch EBA magazine that in 1995 Joost Overeijnder made a one-way 7-hour crossing from Calais to Ramsgate in his electric boat.

In the light of these moves from Europe, the Committee of the EBA is keen to support a British attempt. Details still have to be thrashed out, but in principle the EBA proposes to put up some financial incentive. To qualify for this award, a contestant will be required to have prior approval from the EBA, must beat all comers and must break *Volta's* record.

As a guide for potential competitors, Edward Hawthorne, the former EBA Users' Group Chairman, has suggested the following principles to govern the event:

1. Throughout the journey, the boat must be powered by batteries and no external charge may be added.

2. The EBA will be responsible for
(i) specifying the starting and finishing lines at Dover and Calais
(ii) certifying the battery-propulsion system and charging procedures
(iii) timekeeping

3. Owners will be responsible for
(i) the seaworthiness of their boat and the competence of their crew
(ii) observing the maritime regulations for the English Channel, especially the rules for crossing shipping lanes
(iii) the safety regulations for their boats, including the supply of navigation equipment, support boats, insurance, etc.

4. The Electric Boat Association will not be liable for any claim arising out of this activity.

WHO WILL TAKE UP THE CHALLENGE?

Write to the EBA Users' Group Chairman, Paul Jackson, through the Secretary at the address above.

Paul Jackson is looking for a 5-figure sponsor to grab national headlines

(Remember Bleriot and the Daily Mail!)

In future, the committee proposes to include an Annual Report with the Spring issue of the E. B. News, to summarise the activities of the Electric Boat Association during the previous year.

The 1996 London Boat Show started the year with a high profile for electric boating. The Thames Electric Launch Company had their own stand at the Show, displaying an electric launch and cabin cruiser, an electric skiff and a range of electric outboard motors. STELCO Electroyacht offered their 700 Deltic cruiser to attract the attention of visitors, and the Earls Court Pool sported inflatable dinghies with Minn Kota outboards, supplied by TELCO and powered by batteries from Chloride Motive Power.

John Williams Boats represented the EBA at the Bristol International Festival of the Sea in May and in the same month we were represented at the Bordeaux Regatta by Brian and Sue Rogers in their Frolic.

A number of social events were well attended during the year, including the Wargrave Rally in June, which was revived last year and now looks set to continue as an annual event. The Upper Thames Boat Rally took place in July when several electric boats cruised to Bossom's Boatyard, where they met other EBA members and enjoyed a barbeque. Closely following this event was the Thames Traditional Boat Rally offering a new trophy for the best traditional style electric boat.

The EBA Summer Garden Party was hosted by Peter and Theresa Cook on a perfect August afternoon, and was extremely well supported by a large gathering of EBA members. The Cookham Regatta also showed a very good turnout of electric boats, and the trophy for the best decorated craft in the Electric Boat Parade was won by Patrick Cavendish in the Voltaire 16 he purchased at the Earls Court Boat Show. "Silent Sensations" was the Nor-

folk Rally at the end of September and the year's social events concluded with a most enjoyable Laying-Up Supper at Cookham in October, which was well attended and will now be an annual event in the Calendar.

The Emsworth Trophy was presented to Morton Ray at the American EBA's AGM for his 435 mile two-way voyage across Florida. The St. David's Trophy was awarded to Edward Hawthorne, in recognition of his contribution to the advancement of electric boating with the publication of his book "Electric Boats on the Thames 1889-1914".

During the course of the year the Viscountess Bury project received a grant of £10,000 from East Cambridgeshire District Council. On 1st June she

The Electric Boat Association enjoyed continued support and sponsorship from Eastern Electricity, and we became members of the Inland Waterways Association - membership number KOXP 1202287.

The Electric Boat News ensured that members were kept advised of the Boat Safety Scheme proposals, and how revised legislation would affect charging points and plug specifications. During the year, CE marking of electrical items became mandatory and the E. B. News advised manufacturers and users of the new legislation.

The June magazine was a bumper issue and not only is its circulation increasing with the EBA membership, it can now be found in a number of public libraries near the River Thames in Oxfordshire, Buckinghamshire, and Berkshire and in the Norfolk Broads. In future it will also be included with literature given to hirers of electric narrowboats in Wales.

E.B.A. Annual Report 1996

was lifted out of the river by a giant crane, ready for the restoration work anticipated to take the next two years.

The world's fifth Electric Boat Association was founded in Norway and called the Norsk Elektrisk Bat Forening.

One of the EBA Trade Members, Brimbelow Engineering, developed a new electric drive, and another member, STELCO launched a hybrid yacht called "Rapsody". The Cotswold Canal Trust completed another successful season with a trip boat powered by an electric outboard.

John Williams Boats sold two launches to South Africa to be used in a training programme and the winner of the 1995 "Silent Sensations" competition *Solar Pichola*, built by Malcolm Moss is being used as a water taxi by the Maharana of Udaipur, who has since asked for a fleet of solar boats to be built.

The year commenced with the very sad news of the death of John Gardner, the EBA Secretary. The position was filled by Barbara Penniall and the Committee remained unchanged until the end of 1996 when Edward Hawthorne resigned after many years' service as User Group Chairman.

As you can see, 1996 has brought many achievements in the electric boating world, and the EBA is continuing to stimulate and promote interest by representing your views to all appropriate UK authorities, the Parliamentary Waterways Group and other associations worldwide. We look forward to 1997 as a year when the EBA will be again be representing its members at Rallies and Festivals, promoting the advantages of electric boating.

PAUL HORSLEY

Chairman



Charging Points - First Provisional List

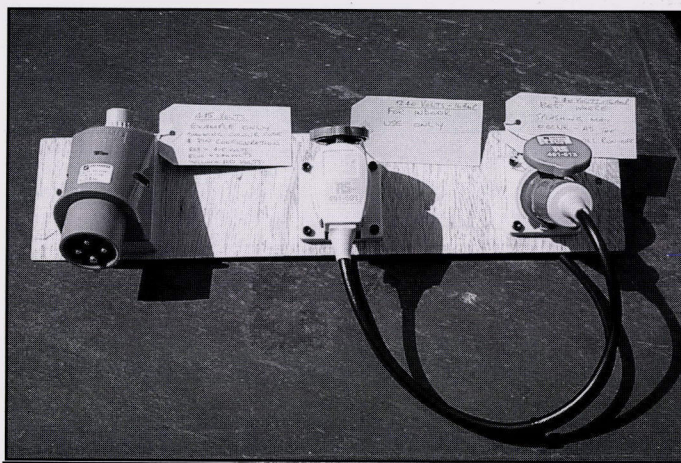
"Charging Points" will appear regularly in *E. B. News*. This first list of points on the Upper Thames has been compiled by Paul and Pauline Jackson in good faith from various sources. If any member is aware of any additions/deletions/corrections, please call (leave message on answerphone) or fax Pauline Jackson on 01628 828256. *Volunteers are required to compile lists for other regions of the country.* Technical enquiries are best directed to EBA Technical Officer Jim Keating on 01494 510770.

CALL AHEAD FOR RESERVATIONS! We suggest you enquire locally for appropriate accommodation. Those places marked with * do have accommodation either there or close by.

Charging Point	From Teddington	Telephone
Molesey Lock*	3 miles	0181 979 4482
Shepperton/Nauticalia	10	01932 244396
Chertsey/Penton Hook Marina	14	01932 565195
Old Windsor Lock	19	01753 861822
Windsor Marina	26	01753 853911
Bray/Oakley Court Hotel*	27	01753 609988
Bray/Monkey Island Hotel	28	01628 23400
Bray Marina	28	01628 23654
Bray/Waterside Inn	29	01628 771966
Maidenhead/Boulters Inn*	30	01628 21291
Cookham Lock	32	01628 20752
Bourne End Marina	35	01628 22813
Bourne End/Edward Hawthorne	35	01628 521606
Marlow/Compleat Angler	38	01628 484444
Temple Mill Island		
/Derek Chamberlain	39	01628 823427
/Paul Jackson	39	01628 828256
Hambleden Marina	43	01491 571316
Henley/Hobbs*	45	01491 572035
Wargrave/Swancraft*	47	01734 402577
Wargrave/Val Wyatt*	47	01734 403211
Shiplake Lock	48	01734 403350
Sonning/Great House Hotel*	52	01734 692277
Reading/Caversham Boat Services*	56	01734 574323
Streatley/Swan Hotel* (#4)	65	01491 873737
Goring/		
Thames Electric Launch Co.*	66	01491 873126
Goring Lock*	66	01491 872687
Moulsford/Beetle & Wedge*	67	01491 651381
Sheridan Line Boatyard	68	01491 652085
Benson Lock	73	01491 35255
Abingdon/Red Line Cruisers*	85	01235 521125
Abingdon /Upper Reaches Hotel*	85	01235 522311
Sandford Lock	89	01865 775889
Sandford/Four Pillars Hotel* (#3)	89	01865 334444
Binsey/Bossoms Boatyard (#1)	95	01865 247780
Bablock Hythe/Ferryman (#2)	103	01865 880028
Newbridge/Rose Revived	107	01865 300221
Shifford Lock	110	01367 870247
Lechlade/Trout Inn*	123	01367 252313
Lechlade/St John's Lock*	123	01367 252309
Lechlade/Riverside Marina*	124	01367 252229

While on the subject of charging points, Jim Keating has heard from the Thames Region of the Environment Agency that they have ordered ten charging points for the Thames, each with two 16 amp BS4343 220v sockets. They plan to install these at nine locks, roughly at 15-mile intervals, viz: St. John's Lock, Shifford Lock, Sandford Lock, Benson Lock, Goring Lock, Shiplake Lock, Cookham Lock, Old Windsor Lock and Molesey Lock. At a later date, points may also be installed at Radcot Lock, Pinkhill Lock and Blakes Lock.

Members are encouraged to write to the Environment Agency in Reading asking when charging points will be in place.



This is the plug and socket assembly which has been approved by the Environment Agency and British Waterways Board and which is presently being considered by the Broads Authority. The EBA is working on an Information Sheet on the electrical aspects of the Boat Safety Scheme.

KEY

- (#1) B & B Osney Lock 01865 247050
- (#2) Slipway available
- (#3) Opening July 1997
- (#4) £10 per night if not eating or staying at hotel

EARLS COURT '97

E-boat Mecca planned for the Thames

The biggest news to break at the London International Boat Show this year was that the old-established firm of Val Wyatt Marine plans to become a centre for electric boats on the Thames. Their Sales Director, Guy Girling, told *E. B. News* that Val Wyatt will be distributors for all the major e-boat manufacturers at their Willow Marina at Wargrave.

The famous names to be represented at the new **Thames Electric Boat Centre** will include STELCO Electro-yacht, the Thames Electric Launch Co., Creative Marine, John Williams Boats and Haines Marine. In addition, Val Wyatt will offer electric drive systems from STELCO (the Dolphin range, based on the Cupex motor) and Brimbelow's E-Drive.

STELCO's range now includes the *Frolic* 645 (21'), the *Frolic* 945 (31'), the *Mystic* 600 and the *Deltic* 700 (seen at Earls Court last year). TELCO is selling the *Voltaire* and Creative Marine (the Norfolk-based firm set up by the former Steam & Electric Production Manager, Simon Read) is now offering the *Frolic* 18 "Moth", a new 16' *Mayfly*, and an electric canoe as well as one-off designs for private commissions.

All these firms were represented on Val Wyatt's wall display and the eyes of passing show visitors were also being caught by a cut-off bow of a *Frolic* 21. On show throughout the day was a video of the *Evolution*, the new 29' electric motor cruiser from Haines Marine.

Val Wyatt will be holding a "Premier Viewing" weekend at Willow Marina, Willow Lane, Wargrave-on-Thames, Berkshire on 3rd, 4th and 5th May, 1997 when pride of place will be given to *Evolution*. *E. B. News* was privileged to have a day with the *Evolution* at Haines' boatyard in Nor-

folk and our review appears elsewhere in this issue.

Incidentally, we look forward to welcoming Val Wyatt Marine Sales as a trade member of the EBA.

Lynch motors

Elsewhere at Earls Court, the **Lynch motor** turned up in two new guises:

On the Selva stand, the new "Electro 4" outboard motor made a big splash. This 3kW unit is being trialled in Italy. Apart from the Lynch motor, all the components are Italian. The final decisions as to prop size will depend on these tests. The RRP is expected to be £2,120 plus VAT. Selva Marine Sales are on 01202 706454.

The Lynch motor turned up again in a new saildrive from a name new to us, Sillette Sonic Ltd of Sutton, Surrey. This unit is designed for yachts in the 6-9 metre range and the manufacturers suggest recharging either by wind generator or solar panels. The unit, including saildrive, prop and controller, is expected to retail for about £3,000. Sillette Sonic can be contacted on 0181 715 0100.

Curiously, the Cupex motor was nowhere to be seen at Earls Court - despite being much in evidence at the Friedrichshafen Boat Show last September.

New E-Drive

Upstairs, Gavin Seward was displaying a mock-up **Brimbelow 'E-drive'** on the Mastervolt stand. The motor was coupled up to a power supply and the prop was allowed to revolve behind a protective screen. While we were there, very serious enquiries were being made by a potential customer, Stan Rust, who operates a ferry across the Thames at Twickenham. Apparently he was having a new ferryboat built by Thanetcraft Ltd of Teddington and was investigating the

feasibility of electric propulsion.

We heard later that the order was indeed placed. So now we will see an electric ferry to add to all the other Thames e-boats!

Battery monitor

On a small stand tucked away among the components upstairs, we came across the Link 10 **Battery Monitor**. This little unit "reads your battery like a fuel gauge", as the blurb says. The displays indicate how many amp-hours have been consumed and the time remaining at a given power consumption rate before your battery is depleted. The unit, imported from America, is sold for £180. The Link 20, retailing for £299, provides complete battery status for two batteries or two banks of batteries simultaneously. Contact Merlin Equipment of Oxfordshire on 01491 824333.

Electric outboards

The show included the familiar range of small **electric outboards**. Mercury and Mariner were, as usual, selling identical units under different badges. The T2200 model, for example, was priced at £139 with the Mercury name and at £99 as a Mariner. The Plastimo stand carried a range of Minn Kotas (nothing new for 1997) and the small trolling electric motors bearing the Johnson label were also available. These are, it seems, extremely popular with fishermen in North America but there are no great sales over here.

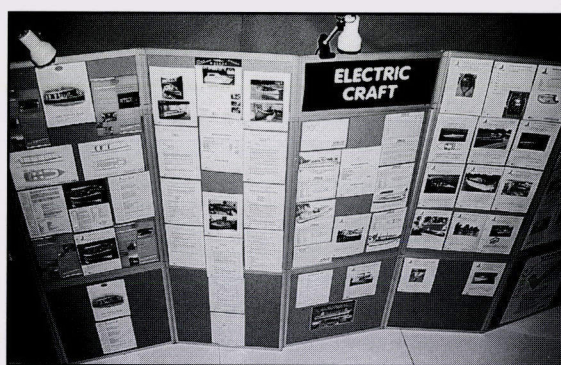
In the last issue of *E. B. News*, a correspondent, Geoff Warren, said that Yamaha made little effort to promote their small electric outboards in the UK. That was borne out at Earls Court. Yamaha showed one 0.25kW unit priced at £472, inc. VAT, but a languid salesman said there was only a small demand and they expected to sell only about 10 units a year.



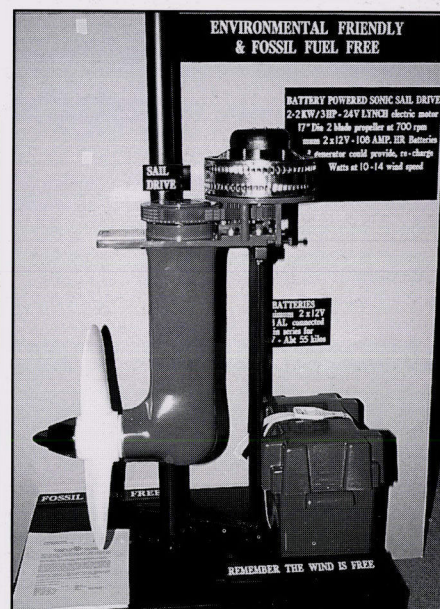
Half a Frolic is better than none!



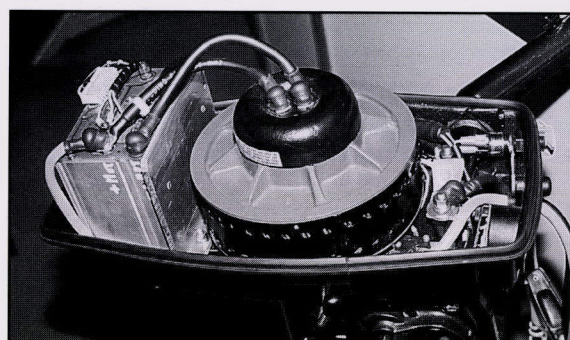
The new Selva outboard ...



All the big names on Val Wyatt's wall display



The Sillette Sonic Saildrive, also incorporating a Lynch motor



... with its Lynch motor



A quartet of Minn Kotas



Guy Girling shows the video of the new Haines cruiser



Gavin Seward (far left) and Colin Seward (far right) show their 'Brimbelow E-Drive' to Adrian Tilbury and Rupert Latham of STELCO.

GREBE FLIES THE ATLANTIC!

Derek Chamberlain reports on the Annual Meeting of the Electric Boat Association of the Americas

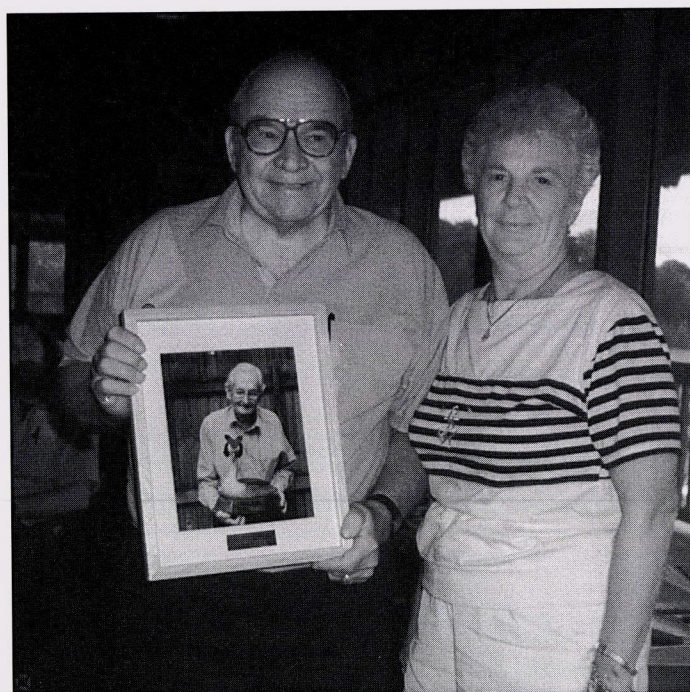
At about 1.30 p.m. on 7th November, with the temperature just over 80 degrees, we put the top down on our convertible and set out along the back roads to Central Florida, arriving at the hotel in Tavares where most members of the EBAA who were attending the meeting would be staying at about 4 pm. After settling in we went to look at Mount Dora, an interesting town of about 5,000 inhabitants, with lakes all around it connected by rivers and canals and sitting on a 'high' point of Florida about 180 ft above sea level. We found a nice restaurant for dinner and by the time we arrived back at the hotel several electric boats on trailers were in the car park.

The next morning we set off for Hickory Point, where boats were being launched into Lake Harris, and were greeted by Ken Matthews. The wind had got up and the lake was very rough. We had a trip in a 21 ft. Beckmann launch, complete with canopy, driven by Jack Jolley from Apalachicola, Florida, which seemed to handle very well in the rough water although we all got rather wet from the spray. (The Beckmann reminded us very much of a Frolic. It is available in kit form for the DIY boat builder). Morton Ray had sold the Ray Explorer in which he did his 435-mile journey across Florida, but the new owner was there with it and Morton and Dot Ray had a Carolina skiff with a Ray Electric outboard. Also present were Douglas Little and Tom Hesselink, both in boats of their own manufacture.

On our return we went into the pavilion for lunch, when it suddenly turned colder and there was a thunderstorm; we learned later from the TV news that the temperature had dropped 20 degrees and an inch of rain had fallen.

After lunch came the formal part of

the meeting. Tom Hesselink spoke of his visit to the Bordeaux Regatta in which he took part, and he was followed by Mark Disosway, the electric vehicle battery engineer from SAFT, who updated us on the company's developments in the battery field.



Morton and Dot Ray were presented with the Emsworth Trophy for their trip across Florida. The voyage was reported in our 1996 Summer edition.

Next should have been Bud Roberts speaking about Kevin Desmond's idea for a do-it-yourself *Electron* boat, but he had unfortunately not arrived. So it was my turn, and I spoke of the various activities the EBA had held in England in 1996, my trip up river to Bossoms barbecue, and the problems we have in finding charging points - something which is not too much of a problem in the USA. There were charging points in the car park of the hotel where we were staying, and boats on trailers were able to run cables to these.

I then presented a framed photograph of the Emsworth Trophy to Morton and Dot Ray for their 435-mile trip across Florida. They were very agreeably surprised and the photo, with an inscription

below it, was much admired by the many members present.

After the meeting I was able to obtain a copy of Douglas Little's book 'Electric Boats, the Handbook of Clean Quiet Boating' which is well written and I strongly recommend it to anyone interested in electric boating. I believe it can be borrowed from libraries in the U.K.

This concluded the formal part of the meeting.

On Saturday morning we went on another boat cruise, this time on Lake Dora. We were invited on to a Duffy 18 belonging to local residents Terry and Sandy Wilson, who entertained us with donuts and champagne. This time the water was much calmer and we soon left the lake and went into the Dora Canal, which is inhabited by herons, egrets, ibis, anhingas and many other birds, and, since we were all in electric boats making no noise, they were in no hurry to fly away. The only creature to hurry away from us was the one and only alligator that we saw. There were seven

electric boats on this trip, including a second Beckmann, this one a 20 ft. open version.

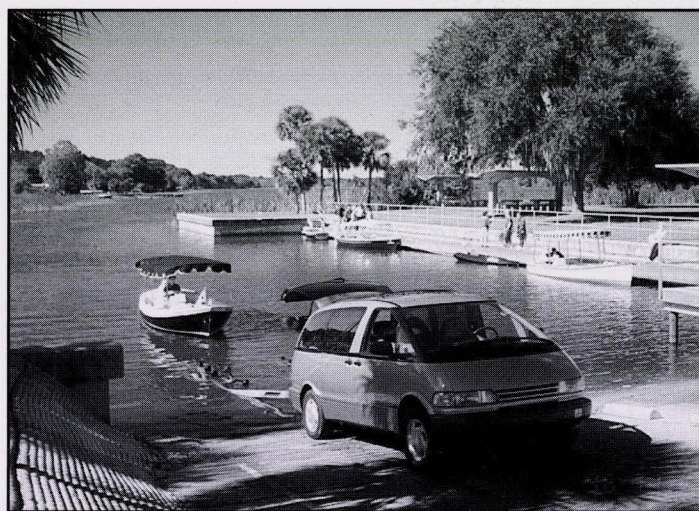
The afternoon was spent exploring Mount Dora and we learned of their annual Antique Boat Show which is to be held next March.

The 1997 meeting of the EBAA is planned to take place in September/October in Chattanooga, Tennessee, not far from Bud and Penny Roberts' home, and Penny is hoping to be able to arrange accommodation at the 'Choo Choo, now a Hilton hotel, and we hope that we shall be able to arrange to be there. Should any other EBA members be in the USA at that time, I am sure that they would also be most welcome.



20ft Beckmann

SEEN AT ...



Launching the Duffy 18

...THE EBAA



Ray Explorer on the Dora Canal

NEWS IN BRIEF

Global Green Cat.

Regular readers will remember that TV journalist Karen Howarth is preparing to circumnavigate the globe single-handed in her solar-powered catamaran "Global Green Cat". We are keeping in touch with her as her preparations proceed. Karen tells us that she is still looking for sponsorship. They have a new team member, Elliot Brodsky from Catalyst Marketing Associates in New York, who is looking for American sponsors.

Karen is looking forward to the start of this solar "first". She says she can be ready within a couple of months once the sponsorship money is raised. Watch this space!

The Greencat team can be contacted at 24 Caythorpe Street, Manchester M14 4UD, tel: 0161 226 0213. You can find out more about the project on the Internet at <http://www.greencat.co.uk> (or through the link on our own EBA website).

Reading Water Fest '97

The 8th Reading Water Fest will be held on Saturday June 28th 1997. The site is between Chestnut Walk and Blake's Lock Museum in Reading Town Centre. The many free attractions will include displays, music and a Parade of Boats. They are keen to have a good showing of electric boats.

Canberra

Newsletters are already coming out about the Second Advanced Technology Boat Race to be held in Canberra, Australia, on 12th April 1997. In our autumn issue last year we reported the first of these events - when our correspondent, Bob Slatyer, was one of the prizewinners.

There have been some minor changes to the rules and regulations this year but the organisers say they are anxious to preserve the theme of "fun, excitement and participation." They say that at the inaugural event last year, the viewing public made it clear that they wanted to know more about the boats and their technology, so this year participants are being encouraged to put on as many displays and exhibits as possible.

Last year this event generated a considerable amount of press coverage around the world. For more details contact the Australian Science Festival at PO Box 193, Civic Square, ACT 2608, Australia. Phone: (06) 205 0588; Fax: (06) 205 0638.

THAMES MOORINGS AVAILABLE

Secluded moorings to rent: Close to Windsor town centre: Ideal for electric powered boats and classic launches: Maximum length 25 ft x 6.5 ft beam: Electric point and water on all piers. Enquiries please telephone Clewer Boatyard Ltd 01753 863478

€-EVOLUTION. NEW ELECTRIC-POWERED CRUISER FROM HAINES MARINE

OUT OF THE MIST AND INTO THE SUNSHINE

EBA Chairman Phil Horsley tries out the new Haines 29 electric cruiser

After driving up from Berkshire through thick fog, I arrived at Brimbelow Engineering's premises in Norfolk in bright sunshine on a perfect spring morning. My quest - to try out *Evolution*, the new Haines 29 Sedan electric launch on the Broads.

We arrived at the mooring, hopped aboard and made ready to sail.

What? No *chugg, chugg, chugg* of a starter motor?

What? No black smoke and smell?

No! Just switch on, cast off and glide almost silently away.

Gavin Seward was at the helm, using the dual-axis joystick to control the twin motors and manoeuvre the 29 ft boat out onto the Broad.

Evolution's twin 2kW "E-Drive" propulsion system is supplied by Brimbelow Engineering. Both motors are fitted with specially designed 14in. propellers and are powered by two Oldham Crompton 72v 250Ah batteries, charged by fully automatic chargers from CMP Batteries Ltd.

The boat itself is the Haines Sedan low-wash hull which leaves very little wake. The spacious, four-berth accommodation is comfortably furnished and has toilet/shower, hot water and a gas oven/hob and fridge.

We set off down the beautiful River Ant and passed the famous windmill to-

wards Barton Broad. We were cruising at 4 knots, taking 14 amps with each motor.



A cormorant, having just caught a large fish, suddenly realised we were there and - somewhat surprised - flapped out of the way.

Gavin and his father Colin explained that with the battery capacity currently installed, this boat will cruise at 4 mph continuously for 17 hours. There is room for larger battery capacities which could achieve 25 hours or more continuous cruising. This is excellent, given that most weekly hire boats only aver-

age 20 to 25 hours per week actual running time.

Out in the cockpit, Colin pointed out the very low wake. There were no fumes and no pollutants in the water - only the noise of the wash from the propellers. We conversed with ease: there was no need for raised voices.

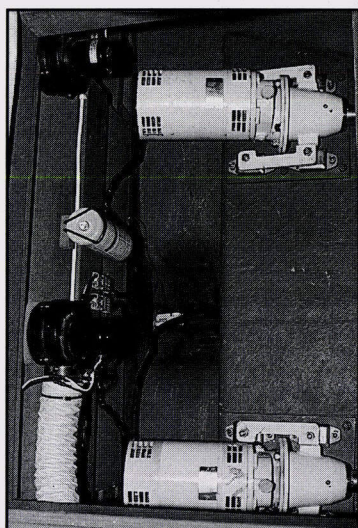
We reached Barton Turf for lunch and then it was my turn. I was somewhat rusty but my nerves were soon calmed by the ease with which the boat manoeuvred. Using the mini joystick to provide all the functions normally provided by twin throttles, I easily piloted the boat to moor stern-to without once using the steering wheel.

After lunch, it was time to return - again with my hands on the controls. The versatility of the electric drive was again quickly evident. Its slow speed control was positive and, again using the joystick, I was able to turn the boat through 360° within its own length. This is a big plus in difficult mooring or turning areas.

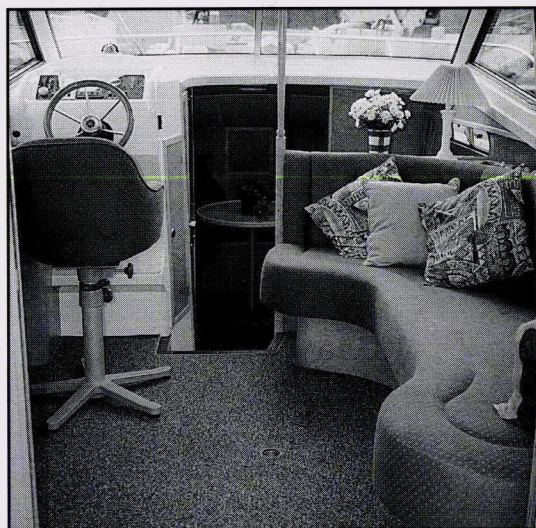
As we returned across Barton Broad we surprised one of the workers carrying out maintenance dredging. He did not hear us coming!

I was very impressed with the boat. It is very exciting. With its top speed of

5.5 knots, its low wash and wake, its easy manoeuvrability, its professional and well-engineered propulsion system, its quietness, its range and its economic running costs, I am sure this electric boat will be a strong contender in the weekly hire and private ownership markets throughout all the waterways of the U.K.



The twin Brimbelow E-Drives



The luxury interior



TECHNICAL SPECIFICATION

2kW x 72 volt high efficiency permanent magnet motors driving through heavy duty helical reduction gearbox. Shaft speeds between 30 and 835 rpm

Twin electronically linked motor controllers operated by a single joystick for complete manoeuvrability. Provides synchronised, proportional and contra rotation control. Rated 40 Amps continuous. Overload protection to avoid damage to system by fouled propeller

Joystick control panel - twin operated on/off switches. LED display for battery state and speed

Twin 14 in high efficiency 3-blade propellers. Prop shaft 316 stainless steel. Heavy duty motor mount, coupling housing. Cushion drive coupling.

500 Ah x 72 volt traction cells in sealed fan-ventilated battery compartment. High frequency battery charger giving 15 hours recharge time from 80% discharged battery.

Range. 3 mph - 20 hours continuous; 5 mph - 13 hours; full speed - 9 hours.

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The basic price, to standard river/estuary specification, excluding VAT, is £56,500.

THE EVOLUTION OF HAINES MARINE

Bob and Mary Haines founded their boatbuilding firm in 1980 and moved to their present site near Great Yarmouth in 1991. Bob comes from a Norfolk boatbuilding background and in recent times has been building some 33 boats a year - both cruisers and yachts.

The *Evolution* is their first foray into electric propulsion. Mary Haines told us that they were encouraged by the enthusiasm of Colin and Kevin Seward of Brimbelow Engineering who were just developing their new 'E-Drive' package in conjunction with Laurence, Scott and Electromotors Ltd. Haines, Brimbelow and LSE are all near neighbours on the Broads.

Apparently Brimbelow approached Haines and they jointly studied the feasibility of fitting twin electric drives to a Haines hull. In particular, they looked at the existing 29' low-wash hull designed by Andrew Wolstenholme and adapted the stern to accommodate the twin screws. There may have been other boats with two electric motors, but they claim with some confidence that the *Evolution* is the first twin electric cruiser.

The *Evolution* was launched by the Chairman of the Broads Authority, Jonathan Peel, on 18th December and the boat was immediately given an enthusiastic review in the Eastern Daily Press. It is now being shown to boating journalists (as weather conditions allow) and will receive its major public launch at Val Wyatt Marine on 3 - 5 May at Wargrave on the Thames.

The sterngear of the Haines 29



NEW CHAIRMAN FOR THE EBA USERS' GROUP

Following the resignation of Edward Hawthorne (announced in our last issue) the Committee of the EBA has elected Paul Jackson to be the Chairman of the EBA Users' Group.



Paul and Pauline Jackson with their Deltic at the Cookham Regatta last summer.

Paul and his wife Pauline featured in our story of the epic trip up the Thames with Derek and Hilary Chamberlain in the Autumn 1996 *News*.

Paul and Pauline, who recently moved to Temple Mill Island on the Thames, are very new to electric boating, having purchased a Deltic at the 1996 London Boat Show.

Paul has his own long-established consultancy group which specialises in his original background of freight transportation.

They have already made an enthusiastic start: Paul and Pauline jointly produced the list of Thames charging points shown on page 3 and Paul will be co-ordinating the responses to the Cross-Channel Challenge.

Members can contact Paul at 4, Temple Mill Island, Bisham, Marlow, Bucks, SL7 1SG. Phone and Fax: 01628 828256 or on his mobile phone: 0385 221660

Dinnie Margaret Hawthorne MBE

All her many friends in the EBA will be delighted to hear that Dinnie Hawthorne was awarded the MBE in the 1997 New Year's Honours List. The citation says the award was given for services to the community, particularly the elderly of Bourne End. Every reader of *E. B. News* will want to join in offering heartiest congratulations to this much-loved lady.

To mark the occasion we have great pleasure in reprinting an article which Dinnie wrote for *E. B. News* in 1986 recounting the way that she and Edward came into electric boating.

It was back in the 1960's that our Collie pup showed the first signs of being positively paranoiac about petrol engines. He made no fuss when they were ticking over in a reasonably gentle manner but the initial starting had the most devastating effect on his sensitive sheep-dog ears. At the first turn of the key he would yowl his head off and although this vociferous objection seldom lasted for more than sixty seconds - that was sixty seconds too long. His shrieks succeeded in driving both us and our good neighbours to distraction.

We lived on the Thames and he - like most other dogs - was "boat-crazy." One had only to mention the word 'boat' and, quick as a flash, he was there at the helm and raring to go. It was, therefore, important to find a solution.

For many years we experimented with all the known treatments which the experts said might cure our dog of his unforgivable anti-social behaviour but ultimately we just *had* to accept the fact that if we didn't want to change the breed of dog, the only alternative was to change the type of boat engine.

Thus began our search for the "silent

electric". Sadly, there was no Rupert Latham on the scene at that period of time and the only engine which we could find was a small underpowered 24-volt Evinrude which had been designed for fishing in calm waters. Undeterred, we stuck this on to the stern of our heavy broad-beamed runabout and rapidly went backwards - and downstream - as expected. The dog, however, didn't seem to mind which way the boat went and gave the engine his wholehearted approval.

The next hurdle was to find a boat which suited the engine. Our traditional Thames skiff responded beautifully but "pride" prevented us from encouraging that particular union. (What may have been appropriate for Henley Regatta was quite unsuitable for carrying the daily shopping.)

Our search next led us to the Serpentine Lake and a most helpful Parks Superintendent who raised an eyebrow, but no objection, when we asked it we could attach our newly acquired electric outboard to one of his hire craft. This more modern skiff also positively skimmed across the still waters and greatly impressed the spectators but, sadly, it didn't quite meet our stability specification. Finding the right shaped hull was proving no less difficult than finding the right electric engine to propel it.

The search continued until eventually we did find a stable but light-weight GRP open day-boat of unknown make which has now given us many years of loyal - and blissfully silent - service. One Christmas we even decided that she deserved a new Mercury Electric Outboard



Dinnie wears the "Straw Bonnet" she created for the EBA Summer Garden Party. Dare she wear it when she goes to the Palace for the investiture?

which delivered more thrust than the Evinrude but only required a 12 volt car battery. Things were at last beginning to take shape and the dog seemed pleased with our progress.

In 1985 - and three outboard engines later - we modified the same faithful hull to take an Austrian 800-watt Accumot pod electric engine which fitted snugly beneath the hull. At long last the old boat was able to graduate to being steered by a respectable mahogany rudder and tiller and we began to lift our heads with something akin to pride. Most importantly of all, however, the dog's decorum had immediately responded to the peace of a silent engine and we will always be eternally grateful to him for propelling us in the right direction.





The irrepressible Kevin Desmond, former Chairman of the EBA and founder editor of this magazine, keeps us up to scratch with a stream of ideas and articles from his home in Bordeaux. This provocative piece, under the title "Here Come the Electronauts", was discussed by the EBA Committee at its last meeting. An "official" reply is to be sent to Kevin. **In the meantime, do we have an EBA member - perhaps a retired schoolteacher - who would be interested in taking a lead in this project?**

Modern electric boat construction has remained largely within the realm of professional boatbuilders. But, to date, no-one has come up with a minimum size, Do-It-Yourself electric boat which, if constructed in secondary schools worldwide, would serve to teach the next generation about marine engineering, about electricity and about ecology.

For want of a better name, let the boat be called the *Electron*. For argument's sake, the *Electron*'s hull (monohull or multihull) should have minimum dimensions and maximum buoyancy. It should be simple to build using freely-available plans and for little expenditure. Construction materials should be readily available at any reasonable DIY store.

The size and weight of the battery pack should be limited to a minimum, but allow for development in energy density in the years to come - with this in turn leading to the possibility of breaking single-charge distance records.

The motor or motors should not exceed a given wattage but allow for improvements in engine weight and propulsion geometry.

Installation could become educationally part of Physics and

Chemistry.

The pilot of an electron would be known as an "electronaut" (of course!). Launching and cruising in an *Electron* should be part of teaching about navigation, astronomy etc.

Electron intercollegiate contests could take place in a number of categories - which, in time, could be developed to the advantage of the education and environmental programme.

The co-financing of an *Electron* - rather like the history of the Optimist sailing dinghy - could come from a local Service Club (like "Round Table" or "Rotary") or sponsor-manufacturers of environmentally friendly products.

This suggestion goes out to all six electric boat associations, whose members are invited to write to me with positive advice (hull plans and mechanical limitations) as to how to improve the *Electron* class specification.

**Kevin Desmond, 54 route de Latresne
33 360 Carignan de Bordeaux, FRANCE**

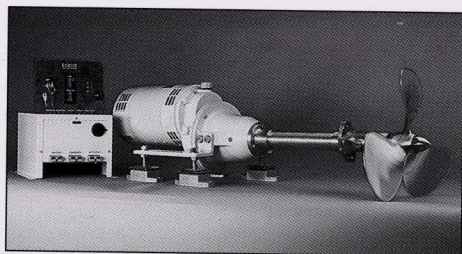
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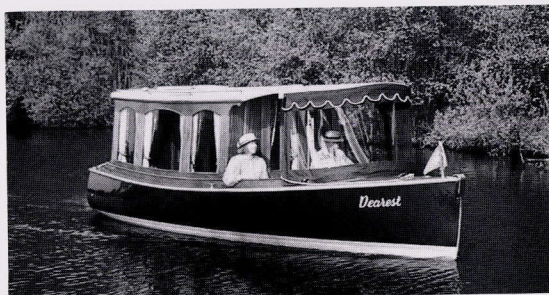
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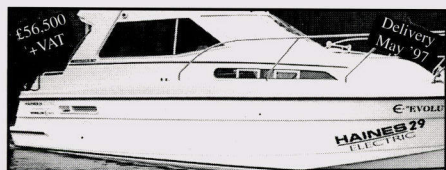
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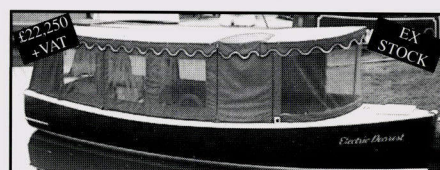
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