

Electric Boat News

The Journal of the Electric Boat Association
(Affiliated with EVA)

Volume 4 : Number 4 : Winter 1991

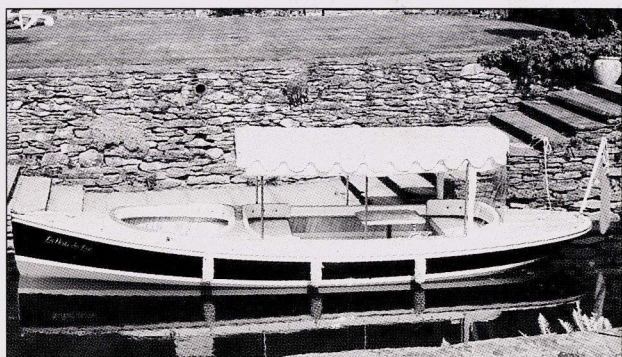


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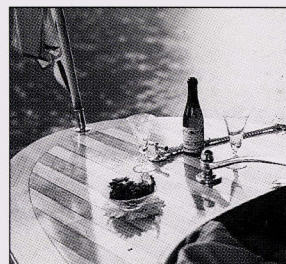
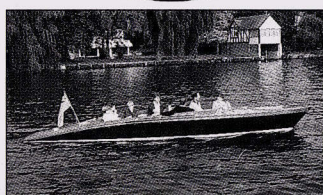
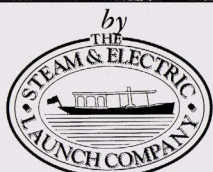
On 9/10th November, 1991
MotorGuide Challenger
created an 24-hour
Electric Outboard
Endurance Record
of 80.2 miles on the
Welsh Harp Lake, North London.
Its batteries were not recharged
during the attempt.



RHAPSODY IN BLUE



Frolic 21 Traditional



Above: Frolic 21

left: Henley Slipper Launch

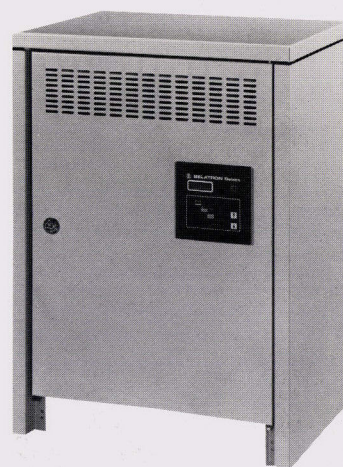
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Please note British Marine Industries Federation's new address is:
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N.B. We are looking for further sponsors. Why not contact the Editor for our most reasonable rates?
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MORE THAN A REQUEST

"Electric Boat News" is the quarterly journal of the Electric Boat Association. To ensure its continued positive benefit for both EBA members and on the boating/electric vehicle industries, YOU are asked to regularly consider **SENDING IN** any relevant information for publication. We are always looking for reports (from the manufacturers) on the latest boat, motor, battery, controller, charger or accessory. We welcome instructive articles about electrifying and fitting out a particular boat (written up by the owner or his boatyard); regional progress reports, home and abroad (from those active in that locality); reports on rallies, races and records (sent in by organisers, sponsors or competitors); letters of constructive criticism; historical articles and ideas for the future [these are always of interest. Please, therefore, send your contributions (500 words max.) with at least one photograph, to The Editor, Electric Boat News, Fairfield House, 122 Olive Road, London NW2 6UU, England. Thank you.

HAMBLEDEN MILL MARINA

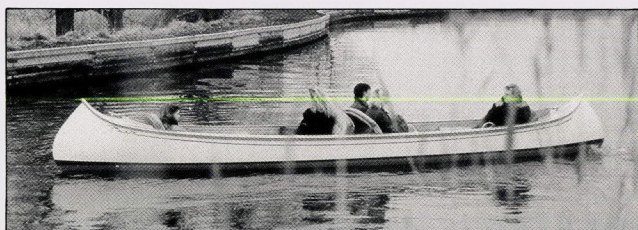
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EBA CALENDAR 1992

10th APRIL

River Thames Society/EBA Lecture
Electric Boats—Past, Present and Future
 Paul Wagstaffe at Liston Hall, Marlow
 8 p.m.

23-25th MAY

Participation in IWA Rally, Taunton

MAY/JUNE

EBA Lower Thames Rally

JUNE

Wargrave-Henley Rally
 for electric boats

23-26th AUGUST

Participation in IWA Rally, Wakefield

AUGUST/SEPTEMBER

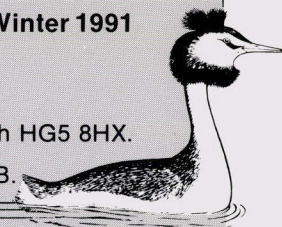
Participation in Cookham Regatta

Proposals for other events to
Edward Hawthorne
(0628 521606)

Chairman/Editor: Kevin Desmond, "Fairfield", 122 Olive Road, London NW2 6UU.

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

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



Main Cover Photo: *MotorGuide Challenger's* quietness of operation enabled her to share the lake with other users.
Inset: "Youth Afloat" . . . Steven Forbes (14), James Lyndsay (13) and David Billingsley (15) at the end of their successful marathon.

Welcome New Members

Mrs K. Bartlett—Cricklade, Wilts.
Victor F. Farrant—
Hampton Magna, Warwick.
Joseph Fleming III—Highland,
New York, USA.
Patrick Harrison—
Hampton, Middx.
John Hill—Manton, Rutland.
Paul Truelove—Grasmere,
Cumbria.

If the EBA success can be measured by frequency of events, then 1991 has proved a champagne year:

INNER LONDON

On Wednesday 12th June, a specially fitted-out dark green Frolic, *Peter Pan*, was given a champagne launch into the Serpentine at London's Hyde Park. Ten days later, she went into regular hire operation. At first recharging was done from the boathouse, but since then a cable has been run out to a mooring buoy, so *Peter Pan* can be recharged overnight.

In addition, another Serpentine boat, *Celebration 90*, has returned from the Norfolk yard retro-fitted with a 1.2 KW Combi outboard, *Celebration* has gone into operation at Regent's Park Lake. We feel sure that the Lido manager, Mr Bulman, will be very satisfied with his decision.

SOLAR . . .

Take Solar-electric boating. on 15th/16th June, three days after the launch of *Peter Pan*, the first heat of the Second Longines Trophy Championship was held on Lake Maggiore over a distance of 62 Km, between Locarno and Ispra, taking in Brissago, Verbania and Lesa. First three places were taken by Germans. Team Mirwald of Bavaria, with *Off-Shore* and *Solar Yacht*, came 1st and 3rd, whilst *Korona*,



built by students from the Konstanz Fachhochschule under the direction of Prof Schaffrin posted 2nd. *Korona* is fitted with an on-board computer to efficiently monitor the input of solar energy.

SOLAR AGAIN . . .

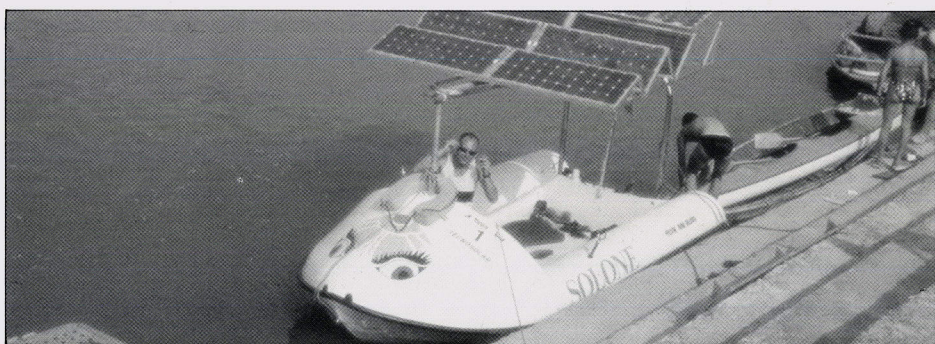
This baby sport may well look back at the weekend of 6th/7th July 1991 as a benchmark for the International simplification of a sport which, until then suffered from a multiplicity of diverse regulations.

On that weekend, thanks to the efforts of new EBA member, Signor Leonardo Libero of Turin, an "experimental" contest was held on Italy's River Po from the Federal motorboating base of Casale Monferrato. Present were

some twelve competitors (3 German, 1 Swiss and 8 Italians). the winner of Il Trofeo dell' Isola was Giovanni Angiolini in *Solone*, a Category 1 (solar prototype) boat.

Present as official observers were Herr Dr Ralph Fröhling, President of the International Union of Motorboating (UIM), Signor Raffale Chiulli, President of the UIM's Sporting Commission, together with the Italian Motornautical Federation's General Secretary and Sporting Commission President.

Following the event UIM President Fröhling requested that three electro-solar boats be present in Monte Carlo Harbour for the UIM's November Conference. The UIM would pay crews' hotel expenses during the Meeting.



Produced by Caversham Lithographic Studios,
16a Bridge Street, Caversham, Reading, Berkshire RG4 8AA.
Tel: 0734 481086 & 470415. Fax: 0734 484775.



THE FOLLOWING WEEKEND...

Saw the Traditional Boat Rally at Henley on Thames, where a whole fleet of electrics (following appearances at Wargrave) were in evidence. And in their midst, the first public re-appearance of **Beazie**, Beatrice Lillie's Veteran electric canoe which inspired **Millers Lass**. Her mahogany bottom has been replanked, she's been given new mahogany and spruce decks but her original motor is running again, its armature having been re-wound.

Meanwhile, "across the Pond",

again on July 14th, Snohomish County PUD (Washington State) organised what they claimed as "The First Annual International Electric Boat Regatta" at the Nighthawk site on Spada Lake in the Sultan Basin Recreation Area. Spada Lake's development began in 1917 as a source of drinking water, the building and raising of a dam as a boon to commerce. Until recently, there were "Keep Out" signs, but with the building of the Henry M. Jackson Hydro-electric Project new recreation sites and facilities were built, although i/c engined boats were banned. Although forty invitations were

sent out, 40 public utilities chickened out. Only five boats entered, and five finished. Late entry Butch Spafford edged out Bill Birdleough by inches in an exciting finish. Birdleough's complaint that Spafford had three batteries to his one, was overruled by race officials.

● *Editor's Comment:* Whilst events at London's Little Venice and California's Newport Bay lay greater claim to have been the world's first, the Snohomish event is to be welcomed and will surely grow...

FOUR WEEKS LATER...

Electric boating may well have scored a first on August 10th when an ElectraCraft Party Boat 16 was used on the River Thames as part of the wedding of Mr Gary Piercey to Miss Toni-Jean Moore. The boat, imported by Gibbs Marine of Shepperton, of which Mr Piercey is General Manager, was used to take the bride and bridesmaids to the landing stage of St Nicholas's Church, Shepperton, whence the Vicar and choir processed with them to the waiting groom. Vows exchanged, Mr and Mrs Piercey et. al. left by boat for their reception. Congratulations!



A FORTNIGHT LATER...

A demonstration of electric boats, first of its kind in the Netherlands, was organised in the lake district of Reeuwijk on sunny 23rd August. Some 15 different boats, with inboard, outboard or "underboard" motor were shown to a group of well over a hundred visitors. Local and national press were favourably impressed and SEV (the "Stichting Electrisch Varen") is convinced that it was an important step in promoting electric boating.

Two of the participating boats were launched quite recently. Firstly a POCA-19, a 19ft sloop of Danish origin, provided with two 1.2kw permanent magnet motors and a Curtis controller, turned out to be a fully competitive with the standard version equipped with a 10hp diesel engine. And second a 17ft mahogany flat, with a 3kW Nexus engine supplied by

STAELCO made the maiden trip just one day before the demonstration. Both these additions to the electric fleet are providing additional proof that electric boating is not just possible by that it is performing extremely well.

THE NEXT THREE DAYS...

24th/25th/26th August saw the Inland Waterways Association's Festival at Dudley, West Midlands

of England. Here, where electric boats have since 1976 been the only way allowed through the Tipton-Netherton tunnel, whilst the Thames Electric Launch Company were showing a Duffy, the BBC's Cliff Michelmores did an interview about the advantages of electric boats with BW's David Allison.

That weekend also saw the second heat for the Second ▶

Solar catamaran ST90



Longines Trophy Championship on the Schwarzee in Switzerland. Some sixteen boats took part, most of them solar-powered on a lake hitherto forbidden to powerboats. The winner was the solar-catamaran **ST90** of Scholl from Geneva, with runners up Mirwald Electronic from Bavaria and Heinz and Jacop Ossenbrink from Berlin. Our very own EBA member, Andrew Spyrou with his Solar-Powered Craft became the first ever British entrant to take part in these truly international contests. How about a few more Brits . . ?



Solar sport on the Schwarzee

FOUR DAYS LATER . . .

On August 31st, came the second electric boat parade at Cookham Regatta (August 31st). A very good rally in glorious weather. Seventeen electric boats paraded past the crowds, showing them the ever increasing variety of shapes and sizes now available, from an electric outboard dinghy **Trout** up to the 30ft inboard **Wagtail V**, including a gaggle of Frolics, two canoes, a punt and last but not least two American imports (the Baycruiser **Windsor** and the Duffield **Margot**). About half a dozen in the fleet were able to enjoy lunch alongside each other.



The Baycruiser Windsor

THE FOLLOWING DAY

But over in Venice, some ten solar-powered boats took part in the Historic Regatta along the Grand Canal of that Northern Italian city. Watched by European VIP's journalists and thousands of spectators, the solar fleet was applauded enthusiastically as they cruised past noiselessly and with just the sun as their fuel . . .

TEN DAYS LATER . . .

On 11th September, Southern Electric hosted an informal meeting at their Slough HQ to discuss boat charging standards on the Thames. This was also a follow-up to the NRA meeting at Reading this February (see EB News IV page 2).

Present were Edward Hawthorne (EBA Chair), David Allison (BW), Stephen Thackray (Maréchal), Gillian Nahum (STAELCO), Dennis Tye, Derek Chamberlain (EBA), Steve Lewin (Southern Electric), John Gardner (Benning UK), Bernard Reid (Starkstrom

London Ltd.), Philip Windwood (Eastern Electricity), Robin Newlands (NRA Thames) and Pat Wagstaffe (EBA minutes-taker!)

It was agreed that although at present the majority of charging needs for electric boats could be met by a 16-30 amp system, installations should be larger to allow for increased boat sizes, opportunity charging and the proliferation of on-board "household" equipment.

It was also agreed that the basis of the electric boat charging standard would be that published by BW and which recommends the use of the BICC Maréchal socket type D532/50.

ACTION PLAN

The Navigation Authorities have had further meetings since then to firm-up the technical specification for the standard charging point and associated safety and cable requirements, including the issue of providing for earth loop monitoring. Be it tokens, coins, credit or "smart" cards, the

best payment system will then be finalised. This achieved industry reps will design and build a prototype box for installation and testing at Hambledon Mill Marina. Hopefully the first of many. For its own part, Messrs Tye and Chamberlain for the EBA are now pressing on with identifying electric boat users' needs, particular searching out new potential charging point locations at overnight moorings, pubs, hotels, marinas and boatyards, canal towpaths, farms and lock islands. **THIS IS WHERE YOU AS MEMBERS ARE ASKED TO SEND IN ANY SUGGESTIONS.**

In time, Information Sheets will also come "on tap" giving guidelines on charging point issues — including many other points discussed at the Slough Meeting.

● *Editor's Comment: The prototype charging point should be completed to a strict deadline, definitely in time for the EBA's tenth anniversary on May 20th 1992.*

THREE DAYS LATER

And for the next seven days, visitors to the Southampton International Boat Show were able to walk past three stands exhibiting electric boats — ElectroCraft (Gibbs Marine Sales), Duffield (TELCO) and the first public launch of the live-on-board weekend cruiser, the *Deltic* (STAELCO). Named after a famous express train but with the characteristic “-ic” affix, the first Deltic, has been commissioned by Adrian Tilbury to add to his Swancraft fleet. Designed by Andrew Wolstenholme, it measures 21ft overall with an 8ft beam. “I’m very enthusiastic about this boat”, Latham told customers at Southampton. “Not only do I think it looks great with smart 1990’s



styling. It has a little cooker, washbasin, porta-potty and beds. It feels reasonably spacious.”

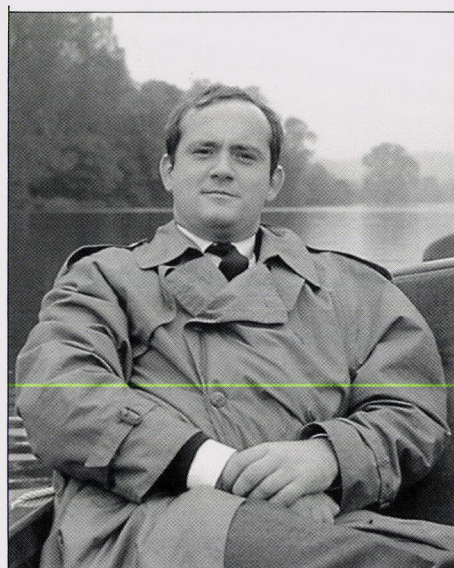
Whilst twenty-two Southampton Boat Shows had seen a distinct absence of electric boats, suddenly there was a five-strong fleet, so no

wonder the “Southern Evening Echo” did a special feature. Another exhibitor, Drascombe of Totnes in Devon, builders of *The Henley* day-tripping launch took a shine to replacing their petrol unit with an electric one . .

ELEVEN DAYS LATER

Back in Europe, on Monday 2nd October, STAELCO gave demonstrations of *Electribelle*, a 21ft Frolic (with slightly greater freeboard) to the five companies currently operating a 20-strong fleet of petrol tourist launches along the canals of the historic Belgian city of Brugge (“the Venice of the North”).

How did this come about? During *Move Electric '91*, the EBA Stand received a visit from Mr Peter Van den Bossche of



CITELEC, the European Association of cities interested in the beneficial use of electric vehicles. CITELEC was founded in February 1990 under the patronage of the European Community. To date, CITELEC counts as its members: Antwerpen, Avignon,

Brugge, Calgiari, Chatellrault, Coventry, Dijon, Gent, Grenoble, Kortrijk, La Rochelle, La Spezia, Lausanne, Lyon, Metz, Monaco, Mons, Namur, Nantes, Oxford, Padova, Palma de Mallorca, Pavia, Randers, Strasbourg, Trento, Trieste, Verona, and Woluwe St Lambert.

CITELEC holds the opinion that good way to promote electric vehicles is to locate contests for them in the urban environment with its traffic regulations, and not around some closed race-track. To this end, they have so far organised “Twelve Hour” demonstrations at Brussels ('87), Brugge ('89) La Rochelle ('90) and this year at Padova and Namur. The Twelve Hours of Namur which took place on September 27th to 29th, involved 23 electric vehicles from 5 countries; at the same time Gillian Nahum gave demonstrations up and down the Rivers Meuse and Sambre of *Electribelle* to delegates taking part in the Namur

EV Seminar with speakers from WEVA (World Electric Vehicle Association), Belgium, France, Italy and the Netherlands. The only British speaker was Sir John Samuel of Clean Air Transport (Worthing, Sussex) and even his outfit is part-Swedish.

Two days later, *Electribelle* was trailered into Brugge, complete with police escort. According to Rupert Latham: “The canal system is very tightly controlled. The public are not allowed to have any boats on there at all. There is no public slipway. People who have private houses onto the canal are not allowed to have boats. If any of the five operators put another boat into service, they have to take one out. However, after our demos, including a moonlit one, Brugge authorities expressed interest in doing an experimental electric boat for 1992, so replacing one of the petrol fleet. We will be involved with that challenge”.

ST DAVIDS CHALLENGE TROPHY

Organised by the Electric Boat Association

In memory of the late Jestyn, the Rt. Hon. The Viscount St Davids, the Electric Boat Association, in conjunction with the Viscountess St Davids and Mr Graeme Vanner of Coventry Polytechnic, has devised a competition which it is hoped will help to develop electric boat technology in the years to come.

The Trophy, which has been donated by Fiona the Countess of Arran, will be awarded for "a significant advance in the field of electric boating." It will be awarded annually on a theme decided on by the Executive Council of the E.B.A. After the first contest, this theme will be decided on two years in advance. It is open to professionals, graduates/undergraduates and schools.

The Judges' Decision is final. The judges cannot enter into any correspondence regarding their decision. Neither can the judges of the Electric Boat Association make any claim on the intellectual property arising from the

competition. Success, or otherwise, in the competition may not be taken as an endorsement by the judges or the EBA as to the suitability or otherwise of any of the designs for any particular purpose. Neither the judges, nor the EBA will be part of any contractual arrangements between any client, builder or designer of the boats. Whilst compliance with prevailing laws and regulations is considered by the judges, responsibility for compliance with these, lies entirely with those to whom the law or regulation applies. While the judges will take every possible care of the papers and hardware submitted, they cannot be held responsible for its loss or damage. If in the judges' opinion the standard is not sufficiently high, the Cup will not be awarded.

The Theme for 1992, as decided by the EBA Executive Council, is the design of a low-cost, electrically-propelled "volks-boote". The boat must be safe and useable by all over the age of ten years. The boat must meet safety and other regulations relevant to

the waters on which the boat can be used. The boat must have suitable arrangements for recharging its power supply.

Presentation should consist of no more than four sheets of A1 size (or equivalent) plus a technical report. One of the above sheets should be the lines drawing of the hull. The technical report should be brief, on A4 size paper and should contain any stability, resistance and propulsion calculations. It should also contain details of the method of construction and installation of power plant. It may also contain information about the boat's intended role and market. "Electric Boat News" reserves the right to publish details of any presentation submitted.

Deadline. Intention to enter must be submitted as soon as possible on the form below. Final entries must be in before **30th April 1992**. Both documents should be sent to Viscountess St Davids, the St Davids Challenge Trophy Competition, 15 St Marks Crescent, Regents Park, London NW1, England.

ENTRY FORM—ST DAVIDS CHALLENGE TROPHY COMPETITION (1992)

Name:

Address:

Institution/Company:



SIMULTANEOUSLY

On 2nd October at the British Marine Industries Federation's futuristic looking HQ, Meadlake Place at Egham, Surrey, ten members of the EBA Executive Council met to plan future projects such as the aforementioned charging point, the ST DAVIDS CHALLENGE TROPHY COMPETITION (see insert), the revised EBA Constitution, EBA Information Sheets, an EBA Test Lake, and the encouraging fact that paid-up membership stood (at the time of the meeting) at 122.

Certainly not in conclusion, more in continuation with two more heats of the Longines Trophy (Portofino and Monte Carlo), together with a planned attempt on the 24-hour Endurance Record, it does seem that with **some twenty-two events since April 22nd**, electric boating is gathering a very healthy momentum. But now for news from elsewhere . . .

FROM THE HEBRIDES

Imagine cruising, often at night, down a 9-mile loch flanked by 3,000 ft mountains, using an electric outboard to enable you to silently creep up on any unsuspecting salmon poachers. This is sometimes the task of Aline Estates keeper, Jim McGarrity. The name of the loch is Lagevat and you can find it on the Isle of Lewis, south-west of Stornaway, on the Outer Hebrides. Jim explains: "We've got two electric outboards, one of them a MinnKota. We've found that at two-thirds speed we can get in silently, but haven't caught up with them because of that, yet we've had many occasions when we have not alarmed them and got in close enough to recognise them. Coming down the loch with the wind on your back, then the electric is perfect. But when it blows, it blows. That's the test for a boat — can it drive you against the wind?"

"Up here in the Outer Hebrides there is no vehicle noise or aircraft noise so a petrol outboard can be heard from miles away — not so an electric. Batteries are always the problem because we live in a very rough area. We bring them home at night and use a standard car battery charger for a steady 24-hour cycle. The problem is always that you need four on standby and two in use I will be using additional electric outboards this year on Lochs Tiosan and Raithaid for their quietness.

BATTERIES FOR THE FUTURE — THE RACE IS ON

Under the aegis of the new Energy Development Organisation, part of Japan's governmental agency, a consortium of companies are now taking an intensive look at improving battery technology. "Japan Storage" is developing nickel-zinc and nickel-cadmium batteries; Yuasa — nickel-zinc and sodium-sulphur; Meidensha — zinc-bromine; and Faraukawa — nickel-iron. Toyota has also developed its own zinc-bromide system.

Even more revolutionary, but not in the consortium, car maker Isuzu and Fuji Electrochemical have developed a battery in the form of a capacitor which hold electricity as a static charge on two parallel metal plates separated by an insulating layer. This "capa-

citor" battery, the makers claim, can store 30-50 times as much electricity as the best existing capacitors and, weight-by-weight, has a capacity 20 times as large as a lead-acid car battery. The capacitor battery has a very low internal resistance so it can be recharged in about 30 seconds and at much lower voltages than conventional batteries. The new battery should be cheap and less harmful when discarded because it is made principally from activated carbon and sulphuric acid. Its developers hope to have batteries ready for sale within a couple of years and are looking at applying the technology to electric vehicles.

Meanwhile back in the USA, General Motors, Ford and Chrysler recently agreed a programme with the Federal Government under which more than \$1.2 billion is to be spent over 12 years to develop advanced battery technologies.

TURKEY

The electric slipper-stern *Back-To-The-Future* has now become an elegant yacht's tender to the Classic luxury yacht, *Savarona*, formerly built for the people of Turkey as a thank-you present to their great leader, Kemel Ataturk. At long last, davitt-slung electric tenders for yachts are back in business!



RUSSIA

We recently received a copy of the February issue of "Motorboats & Yachts" published from 8 Gogol Street, St Petersburg, Russia. Therein was a five-page article about electric boats. In his accompanying letter, Deputy Editor Dmitry A Kurbatov states:

"I must take notice, there is great interest to this matter in our country, but we have not available storage battery - this is scarce good on our market now. Maybe, in nearest future, crafts of English Steam & Electric Launch Company will be cruise on Russian inland waterways, prohibited for outboard motors . . ."

"Watch this space . . .!"

BOAT MOORING

Mooring near Sonning, for 30ft boat with electric power (13 amp). Please contact Tom Clarke Tel: 0734 692563.

BOOK REVIEW

"Papers presented at the International Conference on Electric Vehicles for Europe". May 1991. Published by and available from The Electric Vehicle Association of Great Britain Ltd. (213 pages). Price including postage and packing: £40.

If you feel qualified to understand the recent technical developments in electric vehicles and their component parts and wish to evaluate their future benefit for electric boat design, this tome is for you. The eighteen papers are presented in the order in which they were delivered during "Move Electric" at Trentham Gardens. They are illustrated with graphs, tables and diagrams. The Electric Vehicle Association have decided to organise a second "Move Electric" in 1993, again to include boats, so it will be interesting to see how things have integrated by then . . . ■