



I M C A

GOING

WHERE

OTHERS

ONLY

DARE

FOLLOW

World President Report '97



In an Olympic year Mothist Andrew Landenberg Won a silver medal for Australia in the Tornado class. Ex world champion Emmett Lazish with Tim Webster continue campaigning in 18' skiffs with sponsors Xerox.

Around the world Moths are attracting new helms, both young and not so young. In Australia youth sailing is popular as in Japan, the home of the new world youth champion. The USA has a keen fleet of classic Moths, whilst narrow skiffs are being built in Canada.

In Europe the German fleet have acquired many good narrow boats and the Swiss are proving more competitive. In the UK the new boats are expected in 1997 ready for the Europeans.

The Moth class has a home page on the Internet with many sailors using e-mail. An excellent video production made at the worlds is now available, National Associations have copies for purchase. They also have information on home building, plans and second-hand boats.

The dinghy sailing world is changing with emphasis on high performance new classes, I believe the moth retains a niche position. As a development class it is always up to date, suiting lighter helms in particular, check out the worlds results! Cost is competitive and racing life can be many years at the top level.

1997 sees the Europeans at Lac de Joux, Switzerland with the 1998 worlds expected in Europe.

Many thanks to Dr Ian Ward for his many years as World President and to Hubert Bakker who continues to do a huge amount for the class. The UK team have done a great job producing the yearbook and the class is very grateful.

Good sailing,

Phillip Lee.



World Addresses

IMCA World

President

Phillip Lee, 12 Elphinstone Rd, Highcliffe,
Dorset, BH23 5DLL UK.

Tel: +44 1425 278 376.

Fax: +44 1703 421539

Secretary

Hubert Bakker, Anna Bijnss 11 4207 KA
Goringchem, Holland.

Tel & Fax: +31 183 628569

Australia

President

Daniel Firms, 43 Money Rd, Melville,
Western Australia 6156 Australia.

Tel: +61 9 3301752

Fax: +61 9 4582922

Secretary

Peter Cleary, 39 Wilson St, Yarraville, Victoria
3013, Australia.

Tel: +61 39 6876119

Fax: +61 39 6968453

Denmark

Jan Drost, Rodmosevej 139, Tiufkaer,
6025 Viuf, Denmark.

Tel: +45 7586 3043.

Finland

Kenneth Huomo, Talkookuja 5, 02760 Espoo,
Finland.

Tel: +3589 8592210

Fax: +3589 1507 482

Germany

President

Karl-Heinz Troll, Fachrainstrasse 52,
63843 Niedernberg, Germany.

Tel: +49 6028 6974

Secretary

Berthold Neutze, Sandstrasse 7
48317 Drensteinfurt, Germany

Tel: +49 2508 7162

Fax: +49 251 627863

Holland

President

Hubert Bakker, (IMCA World Secretary)

Secretary

Chaim Achttienribbe, Jachtlaan 26, 9757BT
Haren, Holland

Tel: +31 5053 43691

Japan

President

Yamamoto Fusao, Ota-Ku, Minami Magome
4-4-4, Tokyo 143, Japan.

Secretary

Masaki Ogura, 8-7 Yanagi-Cho Kanazawa-ku,
236 Yokahama, Japan.

Tel: +81 45 7844181

Fax: +81 468 735323

New Zealand

President

Ian McMillan, 23 Thorneycroft Ave,
Lower Hut, New Zealand.

Tel: +64 4 567 7924

Fax: +64 4 577 0004

Secretary

Owen Brown, 110 Waipapa Rd, Hataitai,
Wellington New Zealand.

Tel: +64 4 3862 418

Fax: +64 4 4729 922

Sweden

President

Bjorn Hagerman, Hameskvagen 5,
18460 Akersberga, Sweden.

Tel: +46 8 5402 2049

Secretary

Lars Marklund, Frodingsvagen 1,
11256 Stockholm, Sweden.

Tel: +46 8 137341

Fax: +46 8 647 8276

Switzerland

President

Klaus Hofer, Morgenstrasse 75, 3018 Bern
Switzerland.

Tel: +41 31 991 7665

Fax: +41 31 99 11165

Secretary

Martin Zah, Drusbergstrasse 26,
8810 Horgen, Switzerland.

Tel: +41 1 725 6048

USA

President

Scott Sandell, Box 2081, Sag Harbour,
New York 11963 USA

Tel: +1 516 725 3365

Treasurer

Bill Beaver, 1209 Van Buren Circle, Annapolis,
Maryland 21403, USA

Tel: +1 410 280 3318.



They might look different, but they're the same underneath.

The evolution of the International Moth over the last 30 years.

Duncan Jefferies

In 1967, Paul Elvstrom - arguably the greatest living dinghy sailor wrote a book called "Expert Dinghy and Keelboat Racing". I was

fortunate to find a first edition in a second hand book shop, and to my surprise, I found a brief insight into how he regarded the Moths of thirty years ago. This was before the time of any differentiation between the International and British Moths, and of course the Europe, but there are pointers to the latter's future below. I have interspersed some comments on how things have or haven't changed, but ultimately, this article is a look at the fantastic development that has occurred, the way our class is now, and maybe how we'll continue into the future.

"The International Moth is a splendid singlehanded boat which can be extremely easy and cheap to build. The boats are very light in weight, enabling young school boys and girls to get them in and out of the water without help. The boat makes the ideal next step up from the Optimist for budding racing helmsmen. The normal sailplan is very effective and the average schoolboy will have no difficulty in keeping the boat upright."

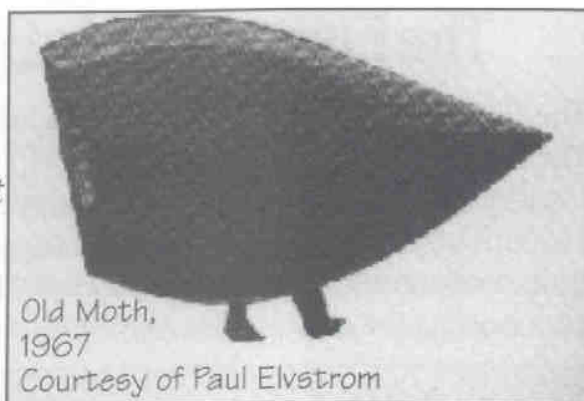
In 1997, across the world, the International Moth class has reached a very exciting stage of maturity. Having led the way with pioneering designs, construction methods and materials, there is movement amongst the unconverted in an attempt to catch us all up. It really is a pleasure to have such good high ground from which to set out our stall. As a class we not only have some of the best sailors, but cutting edge designers, builders and sailmakers.

Our boats may not fit quite the same brief as they could when Elvstrom wrote his article, but that is not to say that the ethos of the class has changed. Far from it - the majority of Moth sailors find that their personal influence in the development of the class is enormously 'hands on' and although we admittedly live in a society more geared to 'throw away leisure', there has always been the option to "do your own thing". This is about to become even more so, as Roger Angell in the UK, has at last been able to develop his Skippy 2 design, from the all conquering Skippy, to enable those who want to build their own boat to do so. It is set to follow Andy Paterson's idea of designing a boat with home construction from plans in mind, but uses an entirely different and exciting method. The effect that these two designers have had and will have on the class is ultimately to everyone's benefit - as Roger himself said "Being a development class brings up it's own problems. Finding a way out of them is part of the fun".

"A large number of widely differing hull shapes have evolved for the Moth, though all the modern ones are very similar in overall performance. Some have advantages in certain conditions."

"The hull of the American 'Florida' Moth is made from two sheets of ply only, and the bottom is a nearly constant vee all through. It is very wide and shallow and will not float level if unattended, flopping over on to one bottom panel or the other, and taking up an angle of about twenty degrees to the horizontal. However, it is surprisingly easy to sail and goes well to windward in light airs."

"The Australian 'Torpedo' Moth is a complete contrast. Scow shaped with a wide flat bow and a very flat bottom, it has to be sailed well heeled in lighter winds, to reduce the wetted surface area. It comes into its own in strong winds and planes extremely fast. Owing to the very light hull weight of around 80lbs, it can keep up with the very much larger International Finn in some conditions. This boat is cold moulded from two layers of veneer."



Old Moth,
1967

Courtesy of Paul Elvstrom



UK Presidents Report

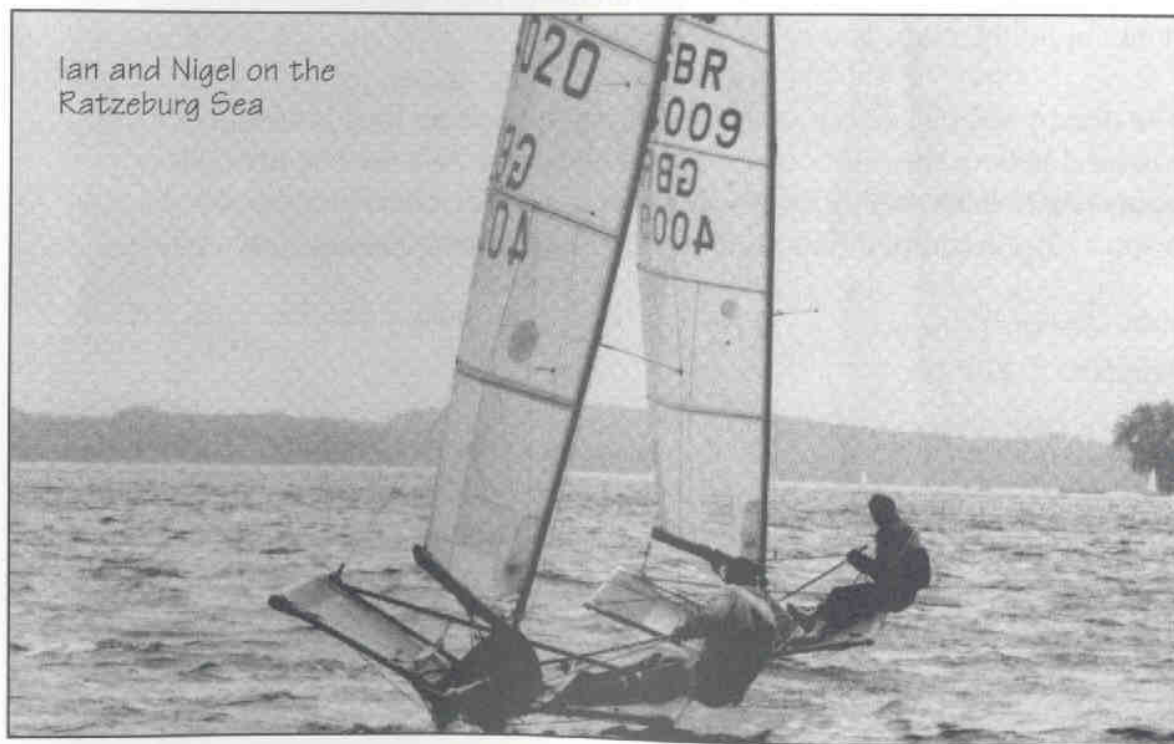
As another year dawns Moth sailors world wide look forward to another season with excited anticipation. One question on everybody's mind is "will Nick Spence complete the triple, Europeans, Worlds and Nationals all in the space of 12 months" I for one, would like to wish Nick many congratulations on his achievements of the last 12 months and hope his success continues in 97.

The UK Committee sees some new faces this year, and I'm sure the class joins with me to welcome them, many thanks goes to Mark Stead who stands down after more than ten years as a serving committee member.

The committee serving the class this year are willing to give advice, recommendations and or, assistance any way they can and are very approachable.

The UK have been asked to host the 1998 world championships, we've accepted the honour and look forward to the challenge.

The next 12 months sees the Nationals at Weymouth, further details of which will be "posted" nearer the date. The Europeans, will be a very exciting event in Switzerland at Lac de Joux, fingers crossed for Nick.



Ian and Nigel on the
Ratzeburg Sea

The Grand Prix event this year is open to all, not the select few and I hope we can make it a worthy competition, as the prize is free entry to the Nationals, for the person who has the best results and completes at least four out of the five events. Hope to see you all out there with me, good sailing,

Nigel.

World Secretary Report



1996 has been a very busy year in which a lot of class development took place, proving very fruitful. Let me share some of the fruits of this year with you.

At the annual General Meeting in Ratzeburg, Phillip Lee was elected World President, replacing Ian Ward. Ian has been a true ambassador of the class for more than 10 years. His involvement with the USA factions eventually paid off with the resurrection of the IMCA USA which will be a fact in weeks rather than months. New growth is also currently taking place in Denmark and Canada and we've had some serious inquiries from France and Finland.

Communication throughout the class has improved during the last 12 months, thanks to modern media such as fax, e-mail, and the world wide web. We have several web sites, with a moth page, throughout the world, some of which have been set up and maintained by people outside the class. Other sites have been set up by Moth sailors. They'll give our public profile a tremendous boost. Check them out and send in your contributions.

Many thanks goes to Christoph Staabs of Germany who manages the Home page for the world association so that general information, i.e. addresses, rules, current designs, ordering information, a racing diary and class information, can be found there and is more accessible to the public.

The 1996 worlds saw Klaus Basler from Hamburg behind a professional camera to shoot over 8 hours of moth action and interviews. Klaus and I worked very closely to produce this video and a big thank you is due to Klaus who spent many hours working on the final version. Those who've seen it are very impressed. Your National Association have some for you to purchase.

When I visited Berthold Neutze last year, he showed me the Moth book he has written for the IMCA Germany, he devoted hundreds of hours to write a true masterpiece which discusses class history, design evolution, building and sailing techniques. Our plan is to translate the text into English and make it available to the National Associations who will distribute the book among their own members. In the short term I plan to make a book of Moth-sailing techniques based on contributions from the last few years.

Hubert Bakker.



Dutch Moth Association, Presidents Report

When I became IMCA World secretary in 1993, the Dutch Moth class was going downhill fast. Since then, we are getting back into the picture, although slowly. At the Worlds in 1996 we had four Dutch competitors and we enjoyed the racing although we didn't figure much in the results. Contrary to previous years each of the Dutch contingent was able to finish all or most of the races, so we have something to build upon.

At the Worlds we had our first Dutch AGM in years and set up a new class committee. After two seasons without any racing in Holland, we will have at least one Regatta next year and a number of local races. On top of that we race in local German races and the International championships.

The Dutch Moth fleet is currently being updated. At the start of the season I bought a Mk2 Axeman for the worlds. After the Worlds, Chaim Achttienribbe took over my ill-fated U-boat and showed how fast it can be at the Autumn regatta on Alfsee in Germany.

At the Worlds Chaim Achttienribbe, Peter de Wijk and Jan Drost decided to build new boats to be designed by Marinus Meijers. Marinus is currently working on the new design which will be loosely based on the Axeman Mk4. We hope to have these new boats on the water in time for the 97 European Championships in Switzerland.

Regards,

Hubert Bakker.

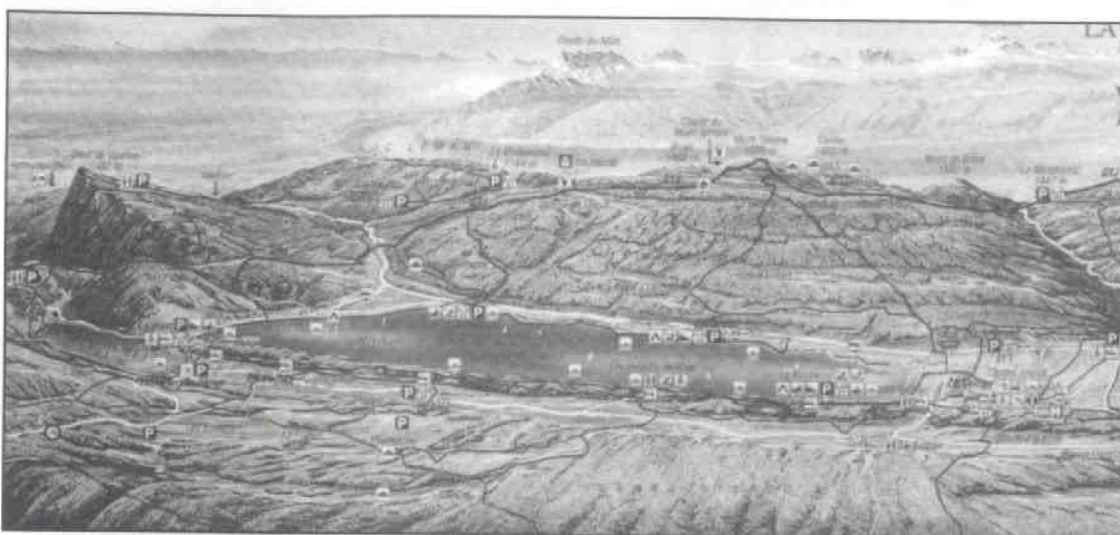
Sven Kloppenburg
on the Alfsee
photo:
Christoph Staabs



The Europeans in Switzerland 1997



The 1997 Europeans this year are to be held on a lake north of Lake Geneva. The Joux valley is 1000m above sea level, full of lakes and forests, Lac de Joux is one such lake. Surrounded by peaks, the highest of which is Mont Tendres, 1680m. The valleys wide open spaces supplies endless hours of mountain bike trails, walks and every type of water activity. So its ideal for Moth sailing. The club hosting the event is The Nautique de la Vallee de Joux.



**Here's a short outline of the proposed timetable
(may be subject to change).**

Saturday 2/8/97	1200	Greet Participants
	1600-2000	Registration
Sunday 3/8/97	0900-1200	Registration
	1330	Briefing
	1400	Race, registered boats only
	1900	Welcome drinks.
Monday 4/8/97	1000	Racing
Tuesday 5/8/97	1000	Racing
Wednesday 6/8/97	Reserve day	
Thursday 7/8/97	1000	Racing
	1900	drinks
	2000	Official meal
Friday 8/8/97	1000	Racing
	1600	Last start possible

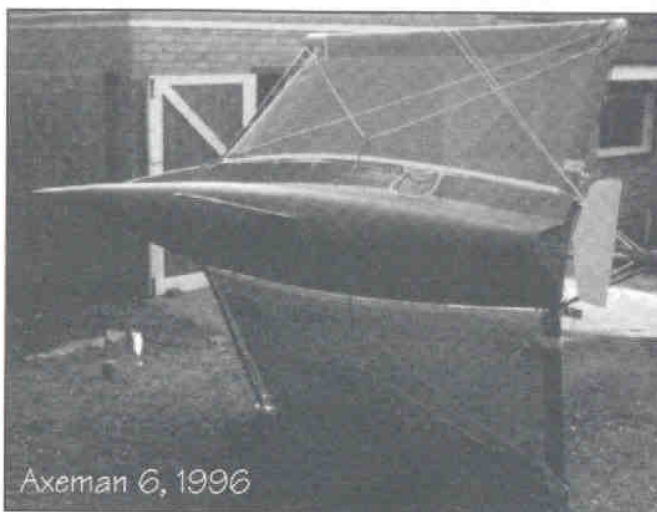
Prize giving.



"Half way in between these is the latest development called the 'Europa' Moth. It looks rather like a small but very beamy Finn and is made from two sheets of ply cunningly slit and wrapped to form a round bilged hull shape. The fastest versions use a similar cantilever mast to the Finn and the boat is a splendid performer in all conditions."

Of course we now have boats that all up weigh two thirds the weight of one of the old hulls and it's not a matter of keeping up with the Finns anymore, but blowing away Canoes, Boss's and catching 49er's in light winds that writes the headlines these days. The Europa became the Europe, and Scow Moths have been all but superseded by the lighter, more all - round performing skiffs.

Unlike 1967, there has been a common ground of sorts hit with regard general hull shape. Andy Paterson's Axeman skiff design at the start of the 1990's heralded a move to ultra narrow, slab sided hulls, which evolved to include pintail transoms, a certain consensus on gradually rounding the bottoms, a brief flirtation with bulbous bows and an almost universal adoption of pitch-pole reducing T-foil rudders. The Australian incarnation of the Axeman, produced by, amongst others, Mark Thorpe, is a derivative of the English version, but is trimmed to suit the bigger winds and seas found Down Under. The transoms are squarer though, and the rig set up is - at the moment - of a very different nature. Like the English versions, they use carbon fibre to make the hulls, wing bars and foils and the majority of the fleets world wide have adopted carbon masts.



The other professionally produced design is the Skippy, again utilising carbon, but also foam rather than the ply of the Axeman 5. This is a subtly different shape and like the original Axeman was designed straight off, rather than as a development of previous designs. This was how the hugely successful and pioneering Magnum designs evolved and it is sad that the Moth class appears to have come to the end of a chapter, with the Magnum 9.9 of Philip Lee being the last professionally produced Moth from John Claridge. Though it is a shame to lose the marque that won the UK Nationals consecutively from 1978 to 1994, the development that has followed is a fitting tribute to the likes of Claridge, Clive Everest, John Pearce, Andrew Landenberger and the many, many others across Europe and Australia who brought such a huge burst of technology and development to the class in the late 80's and early 90's.

"So you can see, that in this class the keen young racing helmsman can learn a great deal about boats and boat designs without spending much money. The boats can easily be built in school workshops and take little room to store. At least three can be carried on one small car and trailer."

I can confirm it is still possible to get three hulls on a trailer (and tow them the best part of 1000 miles without too much going wrong) and the class really does offer the greatest opportunity (and always has, of course) to get in a skiff for proportionally very little money. The 30 years since Elvstrom wrote this piece has seen enormous global change both for the sport of sailing as a whole, and the International Moth, yet the values of the class then, still hold firm now. We still have the quality of sailors and minds that other classes are crying out for, the racing is terrific and if you can find anything on 11 feet you can have more fun on, a lot of people would be interested to know, I'm sure!

excerpts from *"Expert Dinghy & Keelboat Racing"* by Paul Elvstrom. Lymington. 1967. 1st Edition. Unsuccessful efforts were made to contact the publisher. No offence is meant by the unsolicited use of the above article.



RECENT SCOW DEVELOPMENTS IN AUSTRALIA - 1996

My new recently completed moth is the first scow built in Australia for four years and the first scow for some ten years involving any real "development" other than the adoption of wing masts by some boats in the early 1990's. I, in fact, had an aluminium wing mast on KA 9072 in the 1993/94 season.

Whilst it is a new boat, it does not reflect the level of development that I envisaged and would have preferred. This is due to the fact that the hull was already commissioned when I took over the design and construction of the vessel. James Dwyer had already commenced the construction of the boat on the basis of a design from 1985 by the late Bob Nicholson.

Some apology is due to Steve Shimeld who has also been working on scow development. At this stage of his boat's evolution, it remains to be seen whether it will be classified as a skiff or scow design (an arbitrary division in any event) at a National titles regatta.

My basic intention was to launch a scow that was both equal to the current Australian skiffs in rig technology and attempt to address my own concerns relating to non-competitiveness in scow hull design.

Naval architecture tells us that, in relation to a hull, speed equals minimum beam (drag etc), maximum waterline length and minimum weight. I have owned three scows within my previous nine moths over thirteen years and have sailed all three of these at State and/or National titles. I became concerned at the inability of the scows to maintain eleven feet of waterline length in non-planing conditions and the lack of off the wind buoyancy and horsepower in planing conditions. The major features of the new boat are:

- * It is rigged like a current Australian skiff (Lazich Axeman). The wings go all the way to the transom. This assists in vigorous hiking off the breeze which can assist in keeping the boat planing in waves.
- * The stays attach to the wings outboard of the gunwale thus putting less stress on the hull and making the rig more efficient for its given strength.
- * A skiff type hull section has been built into the bow whereby the keel line from the stern to the aft of the centreboard case has no spring. This gives a permanent eleven feet of waterline length and contributes to bow buoyancy upwind and downwind in waves, without excessively contributing to wetted area and drag.
- * The boat is built of foam and carbon fibre with kevlar in the cockpit.
- * The rig is a fully carbon over-rotating wing mast with a monofilm sail.

The overall boat is equivalent to the existing minimum beam, wetted area scows which have competed at National and International level.

I hope this article has provided some insight into the boat and the philosophy behind its construction.

John McAteer, Sydney, Australia, December 1996

International Moths from

MARK THORPE BOATBUILDING

- * Expert in carbon fibre technology
- * Carbon, kevlar or glass hulls
- * Carbon fibre centre boards & rudders
- * Carbon fibre masts, booms & wings
- * FAST pocket luff rigs
- * Complete sail away boats and tuning advice

Championship Results

Worlds: 1st 1991, 94

AUS Nationals: 1st 1990, 91, 92, 93, 94, 95, 96

Japan Nationals: 1st 1994, 95, 96



*Mark Thorpe Boatbuilding
3 Kenna Place
CROMER NSW 2099*

Phone/Fax: +61 2 9972 3277



The Moth Challenge

Organising the 1996 Worlds in Ratzeburg

This year Ratzeburg Segler Verein celebrated its 50th Anniversary. In this jubilee year some special events took place, one of them being the International Moth Worlds. The series which consisted of nine races were held on the big Ratzeburger Sea from 1st July until 6th July. After the successful World championship for the class in 1990 the RSV interpreted the new challenge as recognition from the class and were determined to repeat or even better the 1990 success in this its Jubilee year.

Now its all over, the races have been held. The world champion, young and sympathetic Nick Spence, sailed past reigning champions from Australia and secured the trophy for England. The overseas competitors from Japan, Australia and six other countries have all returned to their homes. Everything went so quickly and now, some time later, people can be heard to say "We'd have liked to hold on to these moments for a little longer". This proves exactly that after the long preparations and the work done by so many volunteers, the week passed smoothly and without any problems for competitors and organising committee alike - just a bit too quickly. Everything went in good harmony from the moment the competitors arrived until their departure. Why? In reflection one cannot



Happy World Champion:
Nick Spence



Local hero Sven Kloppenburg from RSV lost his chance on better overall results by this capsized. End result: 6th (61 competitors)

but notice that all parties took their responsibilities serious and acted accordingly. This extended to the race management on the committee vessel, the jury committee, the substantial, both on and off the water, from the DLRO Brigades at Ratzeburg and Pogeez and the water Police. The catering for the competitors by the Landesorganisation, the race officer and the medical officer should also not be forgotten. I think that everybody lived up to his task very well and by taking up his duties as a challenge contributed to the highly successful 1996 World championships.

It would be inappropriate to name every individual who was part of the organisation, but with writing this we would like to express our thanks to everybody who shared in the work. The success will be written in the annals of the RSV and will be remembered by all for some time to come.



Nick Spence, way out in front on the final day, sails towards his title.

Many items on radio, TV as well as in the press, document that the Ratzeburger Segler Verein aided by officials and helpers alike have clearly raised their profile as an organising committee for sailing events. That is what counts. It is a tribute not only to our sailing club but to our city of Ratzeburg with its beautiful lake. On top of that we can also honestly say "this challenge was FUN".

Report and pictures: Jurgen Hinzpeter/RSV.

Translation : Hubert Bakker.





UK Fixtures 1997

March

- 16 Springfling Regatta, Boughbeeche S.C (handicap event)
28-31 *Easter Regatta, Weston s.c.*

April

- 19 St Georges charity pursuit, Bartley S.C.
26-27 *Open meeting Axebridge* Reservoir, Cheddar Gorge
(joint with Canoes)

May

- 11 *Open meeting, Bartley S.C* (joint with solos)
17/18 Training at Draycote Waters.

June

- 15 Long distant Solent Pursuit, Stokes Bay S.C.
22 *Open Meeting, Blithfield S.C*

July

- 5/6 *Open meeting, Gurnard S.C*
(joint with Cherubs & Europes)

August

- 1-9 European Championships - Switzerland
15-17 Weymouth Regatta
30 - 2 Sept UK National Championships,
Weymouth bay sailing Centre.

September.

- 27/28 Open Meeting Draycote Waters.

Events in italics are Grand Prix events. Four out of the five to count.

Liz Pudney
Photo: Fiona Darling



Oh yeah ? And Elvis lives in my basement...

Short of feeding him buns 25 hours a day, it's going to take something special isn't it? To give yourself a chance, you could always go and buy Skippy 2. Set to be the fastest, lightest, most affordable International Moth ever, it comes from the fantastic heritage that includes 1996 National Championship wins in three countries, as well as current World and European titles.

It probably makes you feel even better when you remember that the same company supplied carbon masts to the International 14, International Canoe and RS World Champions too. In fact, they make so many, they're light years ahead of anyone else.

The only downside though, is that the buns are going to cost extra...

Skippy 2 . . . whatever next ?

Available very soon, from

ANGELL BOATS

BTD Ltd, Unit 4 & 5, Grandby Business Park, Grandby Avenue, Garretts Green, Birmingham. B33 9ZZ

telephone: 0121 789 9333

email: btd@easynet.co.uk fax: 0121 789 9799



The German Fleet

Sven Kloppenburg dominated the four open meetings that were held in Germany this year. The Alfsee Löffelcup saw 12 starters, light airs and Sven winning the event. At Reichenau, competitors from Switzerland were amongst the eight strong fleet. The Nationals took place on the Möhnesse, with thirteen competing for the title in light and shifty breezes, Sven was a force to be reckoned with and was again victorious. Fourteen sailors enjoyed the Autumn Frostbite at the end of October but once again Sven proved himself taking the series in light winds.

The biggest success of 96 was undoubtedly the worlds at Ratzeburg. Twenty German mothsies were seen on the start line, Sven winning the first race, much to everybody's delight, as a German had not won a race at the worlds since 1979, he finished sixth overall. It was great to see two or three new faces at the line.

Most top German sailors use modern boats now and there are some axeman IVs and skippy designs on the water. New home bred designs are rare, as materials are expensive in Germany more so than in England and Australia, efforts have been made to find an importer for the Axeman and, or Skippy but Industrialists don't seem to see a market for it. We also don't have a good Moth sail maker so, have to buy masts and sails in England.

The IMCA-G had a stand at the boat show in 96 in Friedrichshafen (south Germany) but there is an odd feeling about it. There is also a great Webpage, but it's funny, I get more enquiries from abroad, California and so on, than from Germany. Catch you there.

Berthold Neutze, IMCA-G secretary.



Berthold Neutze on the Alfsee
Photo: Christoph Staabs

USA



The Moth class in N. America consists of two main groups, a group racing "classic Moths" and scattered pockets of International Moths, although a resurrection of the class had been expected for a couple of years, this year it finally worked out. In the last few months things have fell into place.

The class ceased to exist in 1977. Scott Sandell as US class president has undertaken to unify the individual moth sailors in the USA, this is a mammoth task as no records exist back to that year. Between the World Association and IMCA USA there is hope of restoring the class to its former glory. A big thankyou is due to Benjamin Krothe III who stayed on as class secretary after the demise of the class in 77 until 1992 when Bill Beaver and Rod Mincher took on a more active role to revive the class.

The International Moths of the US are sporting carbon masts, wings and hulls with a high aspect fully battened sail, all up weights are around 30kg, making them extremely fast and resistant to abuse. Bill Beaver has built 2 narrow skiffs and is in the midst of reworking his first hull into Beaver MkIII, selling his MkII to new class president Scott Sandell. Bill sails in Annapolis Maryland.

In Sacramento California, Steve Smith an Australian (they get everywhere) boat builder, has built a hull and deck mould from a New Zealand skiff design that is slightly wider than the current norm of 14" at the water line, it measures 18" and maybe easier to sail.

Mark Heinzer who was in at the beginning of Steves project has hull No 2 in Nevada, 2 more hulls having been built, bringing the total to 4 in the San Francisco area. Mark providing sails from a North of Australia Pattern.

Trevor Salmon of Vancouver, Canada is putting together a modern skiff of his own design which equates with an axeman 4. The water line beam being 13 and 1/2". He has a male mould that he's willing to lend out. Geoff Kitchen of Canada reports having seen 2 modern Moths sailing in Toronto.

So Moths in the US and Canada are ever increasing. Keep up the good work guys (and girls).

Contacts in the US.

Scott Sandell (president)
Box 2081, Sag Harbour,
New York 11963
Tel: +1 516 725 3365

Bill Beaver (treasurer)
1209 Van Buren Circle
Annapolis, Maryland, 21403
Tel: +1 410 280 3318

Steve Smith (west coast Officer)
4861 Squaw Holly Ct.
Placerville California 95667
Tel: +1 916 626 5511



Happening in Denmark

The International Moth class flourished in the late 70's, Jesper Kold and Poul Oddersborg were promoting and leading the class until it extinguished in 82.

When I moved to Denmark in 1988 there were no Moths left, leaving me to sail alone for the first few years. Last year my family and I moved closer to the water, where I joined my local sailing club. Twice weekly, in the season April-October, they organise handicap races. The fleet consists of: Pirate, 505 470 Laser and 14s and since 1995 an International Moth. Most of the members had never seen a moth before, and although my skiff is rather old fashioned (a medicin design of 83) people were interested. In 1995 I bought a Bunyip IX scow from Gerben Wassenaar in Holland which I took to the Worlds in Ratzeberg. I was astonished to see how the class had developed, so ordered a new moth from Marinus Meijers in Holland.

My intention is to promote the class in Denmark. Last year I sold a scow to a museum, where it is now standing next to Poul Oddersborgs Chelsea Morning. In February there is a National boat show in Fredreia. It takes place every other year in Fredreia or Copenhagen. I intend to show my (alas not an axeman or a skipper) Medicin skiff and my Bunyip scow, I'll also be showing the worlds video.

Another project I have under way is writing an article on moths for a magazine in order to promote the class, and last but by no means least there is to be a Regatta for small dinghies at the local sailing club on 11-12 October on the Vejle fjord, which is another promotional opportunity. I feel convinced that right now is an important moment in Danish mothing and for the Whole World.

Jan Drost



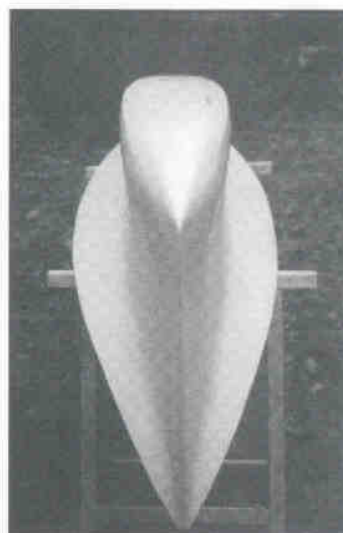
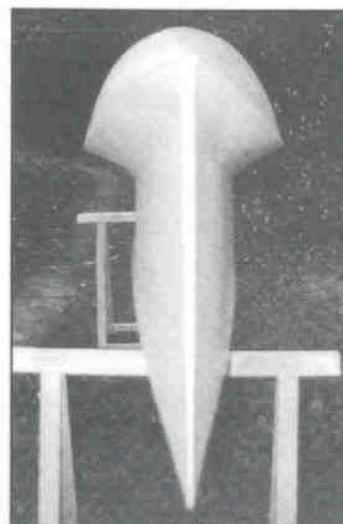
Jan Drost
Bunyip IX Scow
Photo: Ratzburg Segler Verein

What have the Swiss been up to!



Several new moths are being built in Switzerland in readiness for the European Championships, Frédéric Duvoisin from Colombier has designed a hull similar to an Aussie Axeman and a skippy without a pintail, building one for himself and one for Klaus Hofer using 5mm foam sandwich in a female mould with carbon 160g inside and out. Each hull when finished will weigh between 10 and 12kg, the bottom section is exactly the same as Frederics Red Arrow but he's modified the bow, making it 15cm higher in the water to try and combat the difficulties they experience in the waves. The amount of rocker they're using, remains the same as the original pattern, Klaus however will be gaining 3cm on his hull width compared to his moth, Thin Lizzy, that he sailed into 15th at the worlds.

Klaus Hofer & S.W.



New Swiss Moth
Photos by Klaus



Axeman Moths

*Plans, Kits,
Part-finished,
Complete Boats.*

Bloodaxe Boats
Unit 9, Somerton Industrial Park,
Cowes, Isle of Wight. PO31 8PB

Andrew Paterson
Tel +44 (0)1983 298716



The Pocket Luff Rig

The pocket luff rig was first used on moths in Australia in the 1960s. It was then re-introduced by Ian Ward in 1993 and used by him in the 93 Worlds in England. It showed moments of great boat speed which prompted Emmet Lazish to change over to a pocket luff rig on his return from those World championships. Development was initially slow until more sailors switched to using them. but, in the final months before the Australian Worlds in 94 some extremely rapid development took place, leading to the rigs we are using now. I have been continually refining my rig, and the rig I used in the German worlds is the result. I think it is arguably the best all-round rig available

I am of the opinion that pocket luff rigs are faster than standard bolt rope sails, but, I'm no expert on sails and my explanation may not be textbook written.

The main reason pocket luff sails are faster is that the wind is attached to the leeward side of the sail straight away, which enables them to generate more power at a lower wind strength than the bolt rope sail. In contrast, the bolt rope sail has much greater turbulence in the area immediately behind the mast. The smooth entrance in the pocket luff sail is achieved through the use of camber inducers which are connected to the battens. These are small plastic devices of various designs which sit on the back of the mast and rotate to the leeward side each time you tack or gybe, thus forming a smooth transition from mast to the sail.

By being able to generate power more efficiently, the sails can be flatter so they have much less drag. they are also very responsive to luff and boom vang tension as the masts are more flexible in the fore/aft dimension, due to the absence of a sail track. However to get this right, I have spent a lot of time altering the amount of carbon on the front and back surfaces of the mast to achieve the correct stiffness fore/aft.

With the pocket luff rig you have better control over the draft position in the sail. Moth rigs have always had a problem of the draft moving aft in the sail as



Mark Thorpe, Ratzburg '96
Photo: Fiona Darling

the wind strength increases. In a bolt rope rig this is almost impossible to stop, but with the pocket luff rig you have greater control. By locking -up the mast down low with the spreaders, the top third of the mast is allowed to do most of the work. With luff and vang tension you can make the top of the sail dead flat and the leach will automatically open and close with the gusts. This is what I call the rigs accelerator.

The middle and bottom of the sail are the rigs engine room, this is where the outhaul has a major effect on the middle and lower leach tension, and on the amount of draft obviously tightening the outhaul as the wind strength increases will reduce the draft and open the leach. With the draft being further forward in the pocket luff sail than the bolt rope sail, you have to sail a little lower upwind, but you go much faster that you get a lot of lift off the centre board which brings your height back up. This technique takes a little while to get used to.

Reaching is where the pocket luff rig really excels, especially in moderate winds. Once your boat speed increases and the apparent wind starts to move forward, the sails work so efficiently that you can flatten them further and the leach opens, giving a very efficient low drag sail shape. Also the sail now being flatter and more open makes controlling the boat, and general boat handling (such as gybing) much easier. For square running the pocket luff rig is no better or worse than the standard bolt rope sail.

I hope this article has given you an insight into the advantages of the pocket luff rig.

Mark Thorpe.





Championships

Nationals in Japan.

A total of 5 races were sailed in force 1-4 by Japanese mothsists at the Nationals. The racing was close and keenly contested, defending champion Yagi needed to beat Furuya and Ogura in the last race to win, and grittily managed to do so. This year we increased moth numbers and some young people came into the class ! Good competition , good sailing.

Results:

POS	Name	Race:	1	2	3	4	5	Total
1	Tatsuo Yagi		3	1	3	(3)	1	7.5
2	Motohiro Furuya		(8)	2	2	1	3	7.75
3	Masa Ogura		6	4	1	2	(DNF)	12.75

Nationals in Germany.

Sven Kloppenburg Won the German Nationals that were held on Mohnesee, Victorious over 12 other competitors during a series of races held in light and shifty breezes.

Nationals in the UK.

Twenty one competitors took part in the 96 National Championships held at Saundersfoot S.C. Nick Spence consistently showed everybody a clean set of heels in light air racing and was unstoppable,

Worlds at Ratzeberg Germany.

Definitely the height of everybodys year, Ratzeberg Segler Verien were well organised ,well prepared for any eventuality, friendly and committed to their goal of putting on some fine racing , the proof of which can be seen on the worlds video.

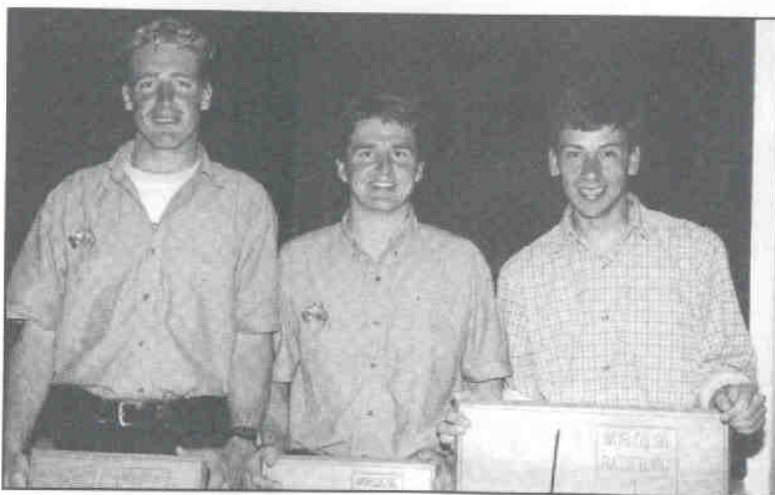
The practice race on Sunday showed how close the nine race series was going to be, Winds were variable throughout the week ranging from force 3-5 with squalls of up to force six. One such squall hit the start line in the first race and the Australians looked to be in a very favourable position, however, Sven Kloppenburg, local hero, rounded the windward mark first, later as the wind moderated, he lost this position to Nick Spence regaining it on the finish line having picked up a wind shift. Mark Thorpe (Aus) took third.

The second race of the day saw the wind moderate even further Spence taking the lead, retaining it to the finish, Thorpe staying in touch but not able to catch him. Simon Payne came in third having followed his instincts to catch a flyer on the port side of the course. Heavy rain and a force six squall appeared for the third race and the weather remained unsettled all day, the Australians dominat-

ed the racing, Thorpe coming in first to Andy Schofields (GBR) second with Tim Webster third. Race four, Thorpe first , Hebden (Aus) second and Webster (Aus) third.

Day three saw the Brits taking command of the lead. Payne showing early pace only to be taken by Spence on the final reach , Schofield managing to keep Thorpe behind him to come in third. Race six saw Payne taking a port end flyer at the start line, crossing most of the fleet to round the windward mark in pole position, however he struggled with a building wind, Thorpe, Hebden and Peter Thorpe coming through on the upwind legs to finish in that position.

Race seven, the wind was back on tap and the Aussies were giving the fleet a hard time. Spence fought on to come in second, with Hebden coming first and Thorpe third. Thorpe kept his hopes alive of becoming world champion when he came in second to Spences first, in race eight, the wind having eased slightly. The final race saw both Nick Spence and Mark Thorpe in contention for the championships. However if you want to know the final result you'll have to get the worlds video, its all on there.



From the right:
1st 2nd 3rd
Photo: Fiona Darling

O.K so that was cruel!!

The last race saw light dying winds and Spence at the front where he remained, with Payne and Schofield following, Thorpe came in fourth giving Nick Spence the Championship.

Results.

- | | |
|--------------------------------------|-------------------------------------|
| 1st Nick Spence GBR 4024 | 2nd Mark Thorpe AUS 9224 |
| 3rd Phil Hebden AUS 9285 | 4th Andrew Schofield GBR 4017 |
| 5th Simon Payne GBR 4001 | 1st Lady Liz Pudney GBR 4014 (14th) |
| 1st Junior Yu Sagawa JAP 1216 (26th) | |



1996-97 Australian - Moth Championships

The festive season, in Australian moth sailing terms anyway, is the time for peak activity and bouts of frenzied competition. This year's event proved to be no exception, in fact, it was probably the closest series for at least 10 years, and without doubt the most controversial. If one was a sports psychologist, one could sum-up the series with a comment like, "Nice blokes can finish first, but only if they remain totally detached from the petty brawls occurring around them". Read on and you may understand the meaning of this comment!



Anyway, this season's Nationals were held in Melbourne on the expansive Port Philip Bay. The venue for the Nationals is rotated between the four main moth states, last year being in Perth, Western Australia. This year the 43rd Australian Moth Championships were hosted by Elwood Sailing Club. Ten races were scheduled in a little over a week, starting two days after Christmas.

The most epic travellers were the Queenslanders who had a return trip of about 4000 km. Most of the sand-groppers (West Aussies) piked out and flew over, except for the intrepid Gordo who risked his life in a non-stop truck ride from Perth, during which time the truck driver didn't sleep a wink and kept taking lots of little coloured tablets. But anyway, back to the sailing.

The predominant conditions for the series were 12-18 knot sea-breezes from the south. The general pattern was that the breeze was sou-west and about 10 knots by 11 am, and then built continually and swung to the south from then on. This pattern made the windward legs a little boring, since it invariably paid to go left, until the layline was reached. A few afternoon races were held in 20-25+ knots. The seas were also quite a handful, the heaviest race being particularly memorable with 2 m plus seas with breaking tops. This race really sorted the fleet out, with only a quarter finishing and numerous



boats sustaining damage. Most of this occurred in attempting a moth-dismount in the breaking waves back at the beach. Many boats got into deep peril here, either by trying to remove fixed rudder T-foils, or by being washed into the jetty next to the club. Usually the assistance of four or five people was required to get safely up the beach. The locals even thought the waves were surfable on some of the days.

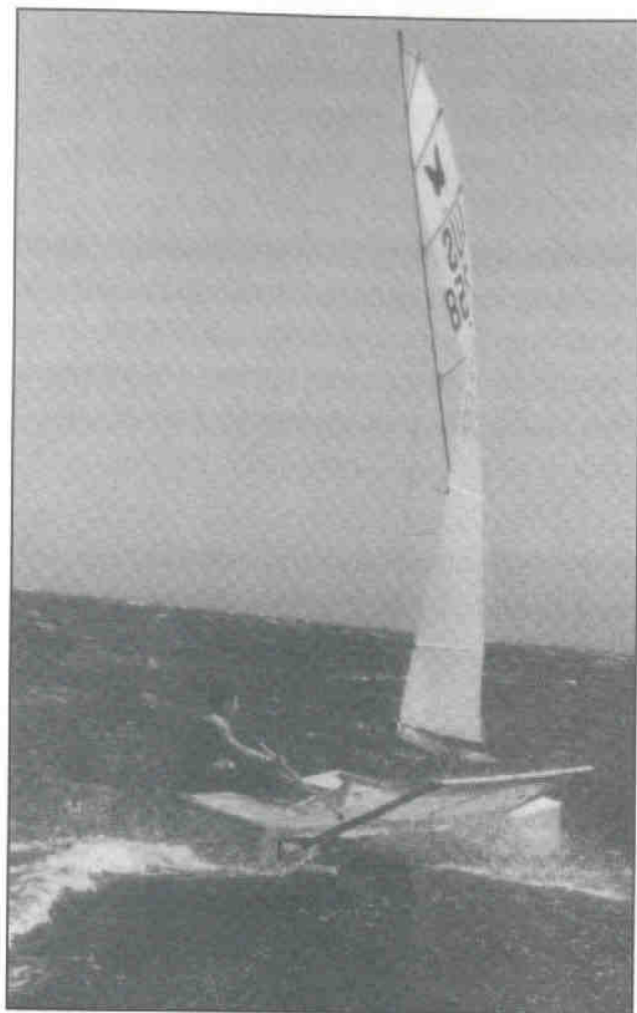
In terms of final results, it was always very close. Five sailors were capable of winning half way through the series, and three vied for the crown in the final race. The eventual winner was Andrew "Tassy" Coxall, with Mark Thorpe second and "Unlucky" Philip Hebden third. Pete Thorpe was in with a chance early in the series but had a few disappointing races in the middle to finish a clear fourth. The plain statement of the results above doesn't do the epic battle justice without some description of the changing mental states of the three contenders.

Firstly, Tassy, whose season looked promising early, but quickly faded with a poor showing at the Selection Trials in early December, was the one with nothing to lose. He was cool, calm and collected, feeling quite at home in the squalid (to say the least) Elwood Sands Motel. Tassy was heard to say, "Geez, it's great this place, just like going on holiday in Cambodia, and almost as cheap!". He was always the last to unrig, having spent the three hours after the race sinking beer on the club balcony.

Mark, on the other hand had put in considerable preparation, being particularly ready for heavier races, these being his main weaknesses. He appeared to be under a lot of self-imposed pressure, and was desperately trying to break the string of second places he had had in recent major regattas. Phil too, was under some pressure, and some thought his mind was elsewhere. He regained some focus in the second half of the series and looked like he had taken the glory. And so it came down to the final race.

The last heat was sailed in a light southerly which became a patchy northerly just before the final leg. Mark was favoured in the light, and had already won convincingly the other light race on the morning of the first day. Phil in contrast, was a little suspect in the light, so the pressure was on. If Mark won the last race, Tassy was worse than 3rd, and Phil 5th or worse, Mark would win overall. In a tight finish in less than 2 knots, Mark won with a whisker to Tassy. Phil did well to finish third, and appeared to have won the series. But, then things took a turn for the bizarre. There was protest, a rare event in moth sailing, against Phil over a port and starboard incident early in the final race. The suspense built and there were heated words and penetrating sideways glances between the protestee (Phil) and the protester (who for reasons which I will think up soon, shall remain nameless). But then, bizarre/worrying incident Number 2. Some of the protestee's allies had launched a protest against Tassy for not paying his entry fee until the second last night. Hence there were two protests deciding the outcome of the Nationals.

The final race was in the morning, and it wasn't until late in the afternoon that the result of the two protests were known. The port/starboard incident against Phil was upheld, and he had to carry a poorer result, and the protest against Tassy was dismissed. So it was Tassy, Mark and Phil, in that order. [At the time of writing, the results are pending an appeal over the right-of-way protest.] The complete machinations of the protests,



Robert Fish was first junior, finishing a very creditable 8th overall. The first scow in the eight scow fleet was sailed by Ian Sim from NSW. First sailor of the sex not winning the main title, was Lee Gray also from NSW.

The most damage award was tied between Dave Ferguson (five dismastings), Tom Addis (one dismasting including a clean break, one set of severely bent spreaders, and a broken rudder), Greg Koennecke (broken rudder and broken mast), and Dave Williamson (complete foredeck rebuild, overnight).

In terms of coming events in Australian moth sailing, the NSW State title will be held at Easter, and the Western Australian Titles continue at various locations, culminating in the final races at the far-flung Albany in late March.

Christopher Dey
President IMCA of NSW

including the long history of the moth factions and the allies, will come out in a mini-series and book, perhaps even a board-game too. I have also since learnt that Diana the Princess of Wales has been romantically linked with several of the protagonists.

In terms of boat developments, the majority of the boats in the top ten carried pocket-luff rigs which are clearly superior in breezes stronger than 5 knots. Kiwi Wayne Cooke came over for the series and finished a good 7th with exactly the same boat from the Lake Macquarie Worlds and limited preparation. Most boats in the top 20 carried carbon masts and used rudder T-foils to improve fore-aft stability. Although there were no major innovations, pocket-luff rigs continue to be refined, leading to consistent gains in all-round boat speed.



Andrew Coxall
Meat Axe
National Champion

Nationals Results in terms of places

(10 heats, best 8 counted)

1. Meat Axe, Andrew Coxall (NSW),	16, 2,5,1,1,3,2,5,1,2,	24.7
2. Late Charge, Mark Thorpe (NSW),	1, DNF, 3,3,4,1,3,2,3,1,	25.8
3. Kaos, Philip Hebden (NSW),	8,6,1,2,2,4,1,1,2,DSQ,	28.7
4. Narrow Minded, Peter Thorpe (NSW),	2,1,2,4,7,2,8,4,4,5,	43.0
5. Avalanche, Robert Nievergelt (NSW),	4,4,6,5,3,9,4,3, DNF, 3,	62.8
6. Job Done, Glen Beebe (QLD),	3, DNF, 4,7,5,10,10,7,6,6,	89.1
7. Kiwi, Wayne Cooke (NZ),	12,5,7,9,8,8,5,10,8,12,	106.0
8. Comfortably Numb, Robert Fish (NSW),	9, DNF, 11,6,9,5,11,12,12,4,	111.7
9. Bulletproof, Garth Ilett (WA),	5, DNF, 8,8,10,13,9,9,9,8,	113.0
10. Atomic Seesaw, Christopher Dey (NSW), DNS,	3,14,12,14,12,7,6,5,11,	113.4

.....

CAWS SAILS

*INT. MOTH

No.1 WORLDWIDE

* SAILS

* BATTENS

* TRAMPOLINES

* ADVICE

UNIT 16, SOMERTON IND. PARK, COWES. ISLE OF WIGHT
ENGLAND. PO31 8PB. TEL/FAX +44 (0)1983 299397





Measurement Matters

Bought a second-hand boat?

Join the association, send £2.00 plus a SAE to the measurement chairman for re-certification complete with old certificate, that the previous owner should give you, if you haven't got the old one don't despair, we have very comprehensive records, also include any name change you wish to make.

Check that the sail in use is the one recorded on the back of the certificate, if not you will have to have it measured, see new sail.

Bought a new sail?

Contact one of the measurers listed and agree a time and a place mutually convenient to measure it, usually the next open meeting. Remembering that measurers are volunteers and are entitled to claim out of pocket expenses if incurred. When all the forms are complete send to the M. chairman with the £15.00 measurement fee. The measurer will enter the sail details on the back of your certificate, so make sure you have it with you.

New boats

The building fee receipt is theoretically payable at the time of laying down the "keel".

Send your £25.00 fee to the M.C. with details of design, builders details and the boats name if you have one. he will send you back your number which should then be drilled, burnt, carved or moulded in 30mm high numerals in the port aft side .

Once the boat is complete, contact a measurer, get a new sail measured at the same time. If you are transferring a sail from a previous boat remember to change the sail numbers (see below under new rules) cross this sail off the old certificate and show proof, including measurements, that the old sail was measured, so that the measurer can include it on the new certificate.

New Rules

A summary of the new sail rules applicable from 31st March 97 is boats with an overall length of 3.5m should have sail numbers of 300mm in height, Neil has measured a few existing sails and they measured 300mm, however he suggests that if an old sail is used on a new boat after the 31st, whilst changing the numbers you should ensure that you're applying the 300mm rule.

Measurement Chairman Neil Chappell.

Measurement Checks you can do yourself

Thoroughly read the rules and make sure that the essential requirements have been fulfilled. You receive the class rules when you send in your building fees along with a building plaque that should be attached to your Hull.



Items that an owner can easily check are as follows.

1. Bands of contrasting colour to the spars indicating the maximum positions that the head and tack will be set to on the mast. There is a maximum Luff length of 5185mm but no maximum or minimum for the foot length. Bands should be either painted, etched or indelibly marked on, and must be a minimum of 15mm wide.
2. National letters and sail numbers should be marked indelibly on the port side aft, in letters of minimum 30mm high. only drilled, carved, burnt or moulded numbers are acceptable.
3. Overall width from wing edge to wing edge (including trampolines) shall not exceed 2250mm. Please bear in mind that dihedral wings will bend, the measurer will compress both wings simultaneously to make this measurement.
4. Overall length. This can be measured first by running a tape along the keel line, if this measurement is under required, the boat will pass, but the measurer will measure along the horizontal water line using a calliper or frame.
5. Check that the boat is water tight, if the measurer has doubts he may do a compression test.
6. Check that the sails numbers are correct, and their spacing and positioning are as laid out in the rules.

A full set of rules are available from the measurement chairman for a fee of £2.00 plus a SAE.

Measurers for IMCA

Roger Angell	Midlands	Birmingham	0121 789 933
Robert Campbell	S. East	London	01438 714992
Toby Collyer	South	Lymington	01509 683799
Ian Forsdike	S.East	London	01707 260504
Jim Hill- Jones	S.West	Paignton	01803 526636
Michael Kerslake	Midlands	Nottingham	01602 663895
Phillip Lee	South	Lee-on-Solent	01705 552035
Steve Reece	East	Luton	01582 418341
Richard Wilde	North	Halifax	01422 832364

Acknowledgments:

On behalf of the IMCA we would like to thank all our advertisers and all our members who have provided articles, photos and advice with a special thank you to Terry Kendrick at Worcester Apple Graphic Services who was always at the end of the phone.

Thanks, Sue Williams (Year Book Editor)

Design & Artwork: Worcester Apple Graphic Services

Print: Printwright Tel: 01905 358485



WORCESTER APPLE

GRAPHIC
SERVICES

Tel/Fax: 01905 352103

e-mail: wags@diat.pipex.com



Moths in Cyberspace

The Moth Class has hit the Internet with several sites on the World Wide Web. The UK page is still taking shape so any constructive thoughts or suggestions are gratefully accepted. Features of the page are: **IMCA(UK)** A quick History of the class. **Contacts; Wings**-The UK online newsletter. **Fixtures 97** including International if known. **International**, news from the moth scene globally. **For sale**, second-hand boat sales for those daring enough to try a real flying machine.

Development?

The site would benefit greatly from the inclusion of an article outlining recent class development, (eds note: so would the yearbook?) To our knowledge the last such article was published in 1990/91 .

Q: Has development stopped since then? (Nope)

Q: Have new faces emerged (yup)

Q: Has Spotty been hard at work in the development shed (yup)

Q: Where is half hat's other half of his hat?

Any answers or articles, pics or information suitable for publication should be sent to Nigel Clark who manages the UK Website in an electronic format if possible, in text or MS word as deciphering and retyping makes the job more difficult.

Web and email "addresses".

UK: <http://www.imca.org.uk>

Nigel Clark's email is, nclark@gauge.co.uk

Duncan Jefferies is, u950051@bournemouth.ac.uk.

Nick Spence is, N.T.Spence-95@students/ut.ac.uk

Si Payne is, spayne@mmm.com

Germany:

<http://www.imf.uni-hamburg.de/staabs/intmothhome-e.html>.

Christoph staabs email is, staabs@ifm.uni-hamburg.de.staabs@dkrz.de

Berthold Neutze email is, Berthold Neutz @ms2.maus.de

Japan:

Tatsuo Yagi email is, Yagi@ja2.so-net.or.jp

Australia:

Christopher Day email is, cdey@physics.usyd.edu.au

Little ches on left 2-3pm 2.30pm
 3-4 sets on right wed

UK Class Association

President

Nigel Williams, 22 Coleridge Close,
 Beechwood Pk, Worcester. WR3 8EF.
 Tel: +44 (0)1905 458535

Secretary/ Treasurer

Ian Forsdike, 84 Heathcote Ave,
 Hatfield, Herts AL10 0RJ
 Tel: +44 (0)1707 260504

Fixtures

Liz Pudney, 1 Linkway, Thatcham,
 Newbury, Berks. RG13 3 DY
 Tel: +44 (0)1635 866374
 Fax: +44 (0)1635 552062

Measurement Chairman

Neil Chappell, 48 Ickenham Close,
 Ruislip, Middlesex. HA4 7DJ
 Tel: +44 (0)1895 637493

Website Manager

Nigel Clark
 Severn House, The Street Woodham
 Walter, Nr. Maldon, Essex. (if you
 have to snail mail him)

Publicity Officer

Duncan Jefferies, 31 Namu Rd,
 Moordown, Bournemouth. BH9 2QU
 Tel: +44 (0)1202 547109

Newsletter Editor

Nick Spence, 20 Carlton Close,
 Boston Spa, Wetherby. LS23 6TH
 Tel: +44 (0)1937 843174

Year Book Editor

Sue Williams, 22 Coleridge Close,
 Beechwood Pk, Worcester. WR3 8EF.
 Tel: +44 (0)1905 458535

Duncan Jefferies - A Man With A Mission.

23 year old Duncan, was born without the normal addition of a fear gland. Unfortunately, it merely assists in coping with the trauma of sharing a tent with the rest of the south coast moth team, rather than making him sail fast. Used to flapping around at the back in an old boat, he's now getting used to flapping around in a newer boat. His recent purchase of a magnum 9 should perpetuate his reputation as being a sailor more capable of wrecking stuff, blowing up cars and starving at open meetings than your average idiot.

Duncan spends his days fooling around at Uni studying Advertising and his nights putting it into practice by drinking, pulling birds and burning midnight computer oil. (only one of the above statements is true).

Duncan is the UK's marketing & Publicity Officer and has kindly volunteered to support the IMCA World Association with publicity and promotion. Without him this yearbook may never have happened, blame him. Mail him at midnight on u950051@bournemouth.ac.uk.



next set from right
 -> Howard Lane, second right from door
 down on left



The International Moth
Year Book 1997