

ORIENTEERING WORLD

97.5 September



FINNAIR
OFFICIAL CARRIER

SUUNTO
OFFICIAL COMPASS SPONSOR



FINLAND

1997



Tampere Jazz Happening 1997

October 31 - November 2, 1997
Tampere, Finland

The Tampere Jazz Happening is the only international festival in Finland to concentrate on the modern variety of this genre. Because of its bold, off-beat programme, it ranks with other top modern jazz festivals across Europe.

For more information please contact your travel agent or local Finnair office:

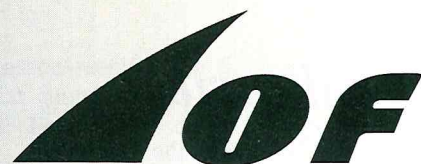
AMSTERDAM	(020) 3316 4010
ATHENS	(01) 325 5234
BANGKOK	(02) 679-6671
BARCELONA	(93) 478 3878
BEIJING	(010) 6512 7180
BERLIN	(030) 885 4131
BOSTON	(617) 482 4952
BRUSSELS	(02) 218 2838
BUDAPEST	(01) 117 4022
COPENHAGEN	(33) 364 545
DUSSELDORF	(0211) 420 1141
FRANKFURT	(069) 2425 2510
GENEVA	(022) 788 5980
GOTHENBURG	(031) 131 621
HAMBURG	(040) 323 513
HELSINKI	9800-3466
ISTANBUL	(212) 234 5130
KIEV	(044) 229 4363
LONDON	(0171) 408 1222
MANCHESTER	(0161) 436 2400
MILAN	(02) 809 458
MOSCOW	(095) 292 8788
MUNICH	(089) 281 023
NEW YORK	(212) 499 9000
NICE	9321 4556
OSAKA	(06) 347 0888
OSLO	2250 8840
PARIS	(01) 4742 3333
PETROZAVODSK	(814) 227 6176
PRAGUE	(02) 2421 1986
RIGA	724 3008
ROME	(06) 923 734
ST.PETERSBURG	(812) 315 9736
SINGAPORE	(65) 733 3377
STOCKHOLM	(08) 679 9330
STUTTGART	(0130) 822 823
SYDNEY	(02) 262 2980
TALLINN	631 1455
TOKYO	(03) 3222 6801
TORONTO	(416) 222 0740
VIENNA	(0222) 587 5548
VILNIUS	(2) 619 339
WARSAW	(022) 695 0811
WASHINGTON	(703) 534 7512
ZURICH	(01) 221 1460



FINNAIR

OFFICIAL CARRIER

Internet: <http://www.finnair.fi>



Published by: International Orienteering Federation,
Radiokatu 20, FI-00093 SLU, Finland
Tel. +358 9 3481 3112, fax +358 9 3481 3113
e-mail: iof@orienteering.org
home page: <http://www.orienteering.org>

Editor-in-Chief: Barbro Rönnerberg,
Secretary General, IOF

Editor: Clive Allen

Editorial Address: Gravbækvej 4B, Virklund,
DK-8600 Silkeborg, Denmark
Tel. & fax +45 8683 7495

Advertising: contact the Editor or the IOF Secretariat

Subscriptions (6 issues yearly):

Europe and all surface mail - FIM 100,-

Air mail outside Europe - FIM 125,-

Send subscriptions to:

IOF, Radiokatu 20, FI-00093 SLU, Finland

Post giro no. 800016-70490763

or to one of the subscription agents:

Australia: The Australian Orienteer, P.O. Box 294,
Black Rock, Vic. 3193, Australia. AUD 35,- (air mail)
or AUD 30,- (surface mail).

Czech Republic: HSH Sport, Gorazdova 5,
120 00 Praha 2, Czech Republic. CZK 600,-.

Denmark: Lars Simonsen, Ny Mårupvej 53,
3230 Græsted, Denmark. DKK 130,- (air mail outside
Europe DKK 160,-).

Finland: Kyösti Saksman, Worldwide Compass Oy,
PL 84, 01601 Vantaa, Finland. FIM 100,-.

France: Marcel Ponroy, 9 Rue Cais de Gilette, 06300
Nice, France. FF 115 (air mail outside Europe FF 140).

Ireland: John McCullough, 9 Arran Road, Drumcondra,
Dublin 9, Ireland. IEP 14,-.

Italy: Baroni Franca, Via Marmolaia 4, 38033 Cavalese
TN, Italy. ITL 35,000 (air mail outside Europe ITL 42,000).

Korea: Oh Jung-hwan, 1574-26 Shillim 11-Dong,
Kwanak-Ku, Seoul, Korea 151 021. KRW 23,000 (air
mail) or KRW 18,000 (surface mail).

Netherlands: Frans Vos, Buurtscheuterlaan 67,
6711 HS EDE, The Netherlands.

New Zealand: Bruce Collins, Otonga Valley Rd., RD1,
Raglan, New Zealand. NZD 40,- (air mail) or NZD 32,-
(surface mail).

Norway: June Bolstad, Sport Media, Postboks 96,
1801 Askim, Norway. NOK 140,- (air mail outside
Europe NOK 175,-).

Portugal: Higinio Esteves, Apartado 2, 2640 Mafra,
Portugal. PTE 3.400 (air mail outside Europe
PTE 4.300).

Spain: Mapa & Brujula, Parla 2, 28991 Torrejon de la
Calzada, Madrid, Spain. ESP 2.900 (air mail outside
Europe ESP 3.500).

Sweden: IOF, Swedish postal giro no. 84263-3.

SEK 150,- (air mail outside Europe SEK 185,-).

U.K.: CompassSport, 25 The Hermitage, Eliot Hill,
London SE13 7EH, England. GBP 14.50 (air mail outside
Europe GBP 17.50) or use VISA or Mastercard - accounts
will be debited 'CompassSport, Twickenham, UK'.

U.S.A.: Sidney Sachs, 6212 Thomas Drive, Springfield,
VA 22150-1220, USA. USD 28,- (air mail) or USD 22,-
(surface mail).

Printed by Simpson Drewett & Co Ltd, 70 Sheen Road,
Richmond, Surrey, England TW9 1UF

CONTENTS

Editorial; Norway excels in the sun; WOC medal winners 4

Five pages of WOC reports, results and pictures:

Classic golds for Staff and Thoresen 5

Austrian triumph in short distance 6

Danish ecstasy after shock Swedish lapse 8

Trail O; WOC snippets 9

On the elite trail with Christer Svensson:

Svärd wins again in Park World Tour 10

Mårtensson and Borg lead the way at O-Ringen 11

Sue Harvey's President's Column 12

Decisions from IOF Council 13

Press relations seminar at Presidents' Conference 14

New technology and mapping news 15

The Junior World Championships reported by Petr Hranicka 16

David Rosen presents **An alternative elite ranking list** 18

Mountain orienteering in the French alps by Denis Rousset 19

Harald Grosse describes

The early days of O-maps in East Germany 20

International fixtures list and other news 22

PUBLICATION NOTES

All **contributions** should be sent to the Editor to arrive not later than the deadlines listed below. Text and graphics may be sent on floppy disk - please ring first to check compatibility and also send printed copy.

Readers' letters, articles and photographs for publication are welcomed. Permission from the Editor should be sought prior to reproduction of articles or photographs.

Outside IOF news sections, opinions expressed by Orienteering World's Editor and contributors do not necessarily represent IOF policy.

ISSUE	PUBLICATION DATE	CONTRIBUTIONS DEADLINE
97/6	5 December	10 November
98/1	6 February	12 January
98/2	9 April	16 March

COVER PHOTO: Lucie Böhm, Austria, heads towards the finish to win the short distance final in the World Championships in Norway photo: Kim Rud

Editorial

With three of the six medal winners in the WOC classic race aged over 30, and one of these eligible this year for his third entry for the Veteran World Cup, one has to start asking serious questions about possible declining standards at the top of the world elite pyramid. Where are the up and coming younger runners striving to attain even higher levels of achievement?

These questions have already been asked in Sweden, and Jörgen Mårtensson has given his opinion - that the younger runners are not sufficiently dedicated to the amount and type of training needed to achieve the highest levels of performance. The vast majority of present-day elite runners want to ensure that their long-term career is not being jeopardised, and that is understandable. And the number of elite orienteers able to attract enough grant-aid and long-term sponsorship to enable them to be, in effect, professionals remains extremely small.

Elite orienteers claim that they are poorer in terms of financial support for their training and competition programmes than their counterparts in almost every other sport. Any possible improvement in this situation is in the hands of national federations, and they could tackle this in at least two ways: by promoting our sport and their stars more effectively - perhaps along the lines of the French initiative described on page 15 - and by building up their elite coaching and support structures and team organisation. This column has argued before that there should be more exchange of coaching expertise between nations, and the potential benefits of better training for many of the world's orienteers was demonstrated just as clearly in Grimstad as it ever has been in the past.

The Editor is moving back to Denmark for the winter, and his address from 15th September until further notice is:
**Gravbækvej 4B,
 Virklund,
 DK-8600 Silkeborg,
 Denmark
 Tel. & fax +45 86 83 74 95**

Because this issue is being published quickly after the World Championships, there will be a larger than usual gap to the next *OW*, which is due to be posted out on 5th December.

Clive Allen

1997 World Orienteering Championships

Norway Excels in the Sun

A very classy World Championships was staged by the three Norwegian organising clubs, IL Imås, Lia IL and IL Express, who put all their skill and experience into producing tough but fair races in terrain which was challenging both technically and physically. There was plenty of style and atmosphere too, from the colourful opening ceremony in the Levermyr Stadium in Grimstad, via the two main finish venues packed with spectators - the one used for the short distance and relay being particularly fine - to the prizegiving ceremonies held at dusk in the cosy town square. It was clear that the organisers were relaxed, in control of everything and enjoying their tasks - and everyone enjoyed the Championships along with them. The one thing they provided a little *too* well was the weather - hot, sunny and humid throughout, conditions which were very energy-sapping for the competitors, and some suffered with below-par performances.

Norway's runners were highly motivated and performed well on home terrain, none more so than Petter Thoresen, world cham-

pion in Sweden in 1989 and at short distance in the USA in 1993, and now again at classic distance in 1997. His arch-rival, Sweden's Jörgen Mårtensson, was just 1.42 slower to add another silver medal to his already huge medal collection. Another gold for Mårtensson looked there for the taking in the relay until Sweden's 3rd leg runner, Jimmy Birklin, was dramatically disqualified, missing out a control whilst clearly in the lead.

Norwegians Hanne Staff, Hanne Sandstad, Bjørnar Valstad and Kjetil Bjørlo also gained individual medals, but perhaps the biggest cheers from the large crowds were reserved for the last starters in the short distance races, Lucie Böhm of Austria and Janne Salmi of Finland, both of whom came through to win gold medals.

Denmark's men's relay team realised the potential they have shown so often with a narrow victory over Finland, whilst the Swedish women's team made up for some disappointing individual performances with a convincing win over the favourites Norway.



Women's relay medal winners celebrate at the flower ceremony on the race site. This short ceremony, which preceded the main prizegiving in the evening, was a new feature of the World Championships this year

photo: Clive Allen

WORLD CHAMPIONSHIP MEDAL WINNERS

CLASSIC DISTANCE

Men, 13.66 km

Gold	Petter Thoresen NOR	1.40.16
Silver	Jörgen Mårtensson SWE	1.41.58
Bronze	Kjetil Bjørlo NOR	1.43.04

Women, 8.64 km

Gold	Hanne Staff NOR	1.12.56
Silver	Katarina Borg SWE	1.13.40
Bronze	Hanne Sandstad NOR	1.14.34

RELAYS

Men

Gold	Denmark	4.18.58
Silver	Finland	4.19.14
Bronze	Norway	4.24.27

SHORT DISTANCE

Men, 4.2 km

Gold	Janne Salmi FIN	26.05
Silver	Timo Karppinen FIN	26.17
Bronze	Bjørnar Valstad NOR	26.27

Women, 3.1 km

Gold	Lucie Böhm AUT	25.15
Silver	Hanne Sandstad NOR	25.29
Bronze	Marie-Luce Romanens SUI	25.57
	Hanne Staff NOR	25.57

Women

Gold	Sweden	2.51.41
Silver	Norway	2.52.56
Bronze	Switzerland	2.56.28

The Classic Race

Gold for Staff & Thoresen

No well-known names missed out at the qualification stage, but one Russian girl was disqualified after she failed to punch correctly at the last control, the jury taking a firm line on the matter.

The finals day was hot - very hot - splendid for the many spectators but not for the runners, some of whom suffered towards the end of the race. The finish was in the flat grounds of a horticultural school which meant that spectators had to crowd the side of the run-in in order to see the action; on the other hand, the effective run-in was very long, and before the end it was said that there were spectators right back to the third last control - perhaps giving unfair advantage to the later runners: "Like being in the Tour de France", as one of them said.

In the women's race the lead was held by Brigitte Wolf SUI for some time until it was emphatically taken over by Katarina Borg SWE, continuing her O-Ringen winning form in bringing the lead time down by over 7 minutes. But Hanne Staff NOR was announced to be over 1 minute quicker from a radio control 12 minutes back from the finish, and she duly took a 44 second lead, to great cheers from the large and vocal local support. None of the 7 later starters could better that, so it was gold for Hanne Staff and silver for Katarina Borg. Hanne Sandstad took bronze, 1.38 down on the lead time, to make it 2 medals for Norway.

One notable placing was a new name from Ukraine - Nina Winnyska finished in 15th place, 9 minutes down on the winner.



*Katarina Borg, deep in the forest, heads for a silver medal
photo: Christer Svensson*

The commentary team's 'man in the forest' told us that Petter Thoresen NOR made a significant error at control 1, but it soon became apparent that the last-but-one starter was going to make an impact on this race. Jörgen Mårtensson SWE, starting 2 minutes before Thoresen, was the fastest at the first radio control, but by the second radio control Thoresen had caught him up, and from then on it was a battle between the two.



Mårtensson reached the finish first, but only far enough ahead to take the silver medal - Petter Thoresen took the gold by 1.42.

Again it was a bronze for Norway, Kjetil Bjørlo finishing 1.06 adrift of Jörgen Mårtensson. Carsten Jørgensen DEN ran probably his best race of the season to finish 4th. Tom Quayle AUS, in his first season as a senior, finished an impressive 14th, 9.39 down on the winner.

Many runners said that this race, with its hills and undergrowth and the technical quality coupled with the heat, was the toughest competition they had ever run in.



Petter Thoresen wears a winning smile as he heads for the finish behind Allan Mogensen (left), and is quickly congratulated by silver medallist Jörgen Mårtensson who finished 18 seconds earlier (above)

photos: Kim Rud

Leading Results - Classic Final

Men, 13.66 km: 1. Petter Thoresen NOR 1.40.16, 2. Jörgen Mårtensson SWE 1.41.58, 3. Kjetil Bjørlo NOR 1.43.04, 4. Carsten Jørgensen DEN 1.43.51, 5. Tomás Prokes CZE 1.45.01, 6. Janne Salmi FIN 1.45.24, 7. Johan Ivarsson SWE 1.45.53, 8. Mikael Boström FIN 1.46.35, 9. Rudolf Ropek CZE 1.46.41, 10. Timo Karppinen FIN 1.47.14, 11. Sören Nymalm FIN 1.47.32, 12. Edgaras Voveris LTU 1.48.05, 13. Allan Mogensen NOR 1.48.13, 14. Tom Quayle AUS & Torben Skovlyst DEN 1.49.55, 16. Dominic Humbel SUI 1.51.20, 17. Yuri Omeltchenko UKR 1.51.26, 18. Tomas Asp SWE 1.52.16, 19. Chris Terkelsen DEN 1.54.01, 20. Daniel Giger SUI 1.54.09, 21. Steve Hale GBR 1.54.18, 22. Vladimir Alexeev RUS 1.54.33, 23. Stephen Palmer GBR 1.54.57, 24. Christoph Plattner SUI 1.55.43, 25. Bjørnar Valstad NOR 1.55.53, 26. Steve Nicholson GBR 1.56.17, 27. Ants Grende LAT 1.57.03, 28. Arto Rautiainen SWE 1.57.24, 29. Fabrice Vannier FRA 1.57.28, 30. Jozef Pollák SVK 1.58.00, 31. Alexandre Mikhailov UKR 1.58.18, 32. Alain Berger SUI 1.58.35, 33. Janis Ozolins LAT 1.59.06, 34. Jozef Chupek SVK 2.00.32, 35. Valentin Novikov RUS 2.01.04, 36. Roberto Pradel ITA 2.01.55, 37. Thomas Kreici AUT 2.03.16, 38. Svajunas Ambrazas LTU 2.03.37, 39. Jean-Daniel Giroux FRA 2.04.12, 40. Pierpaolo Corona ITA 2.05.38.

Women, 8.64 km: 1. Hanne Staff NOR 1.12.56, 2. Katarina Borg SWE 1.13.40, 3. Hanne Sandstad NOR 1.14.34, 4. Kirsi Tiira FIN 1.14.38, 5. Gunilla Svärd SWE 1.14.50, 6. Anniina Paronen FIN 1.16.35, 7. Sabrina Meister-Fesseler SUI 1.17.46, 8. Yvette Hague GBR 1.18.17, 9. Marie-Luce Romanens SUI 1.18.37, 10. Vroni König SUI 1.18.56, 11. Johanna Asklöf FIN 1.19.03, 12. Brigitte Wolf SUI 1.20.48, 13. Elisabeth Ingvaldsen NOR 1.21.27, 14. Frauke Schmidt Gran GER 1.21.40, 15. Nina Winnyska UKR 1.21.56, 16. Lucie Böhm AUT 1.23.24, 17. Külli Kaljus EST 1.23.46, 18. Jenny James GBR 1.24.37, 19. Anna Garin ESP 1.25.12, 20. Reeta-Mari Kolkkala FIN 1.25.43, 21. Anette Granstedt SWE 1.26.00, 22. Jana Cieslarová CZE 1.26.13, 23. Heather Monro GBR 1.26.35, 24. Danute Månsson LTU 1.27.19, 25. Tania Robinson NZL 1.27.38, 26. Antonia Wood NZL 1.27.49, 27. Svetlana Gorlatenkova RUS 1.27.50, 28. Marlena Jansson SWE 1.28.04, 29. Tatiana Iaksanova RUS 1.28.36, 30. Heidrun Finke GER 1.30.15, 31. Alix Young AUS 1.31.45, 32. Natasha Rowe AUS 1.33.01, 33. Ann-Kristin Høgseth NOR 1.33.05, 34. Marcela Kubatková CZE & Karin Schmalfeld GER 1.33.30, 36. Enikő Fey ROM 1.33.33, 37. Judith Keinath GER 1.34.15, 38. Liz Campbell GBR 1.34.46, 39. Tine Rasmussen DEN 1.35.28, 40. Anna Gornicka POL 1.35.32.

Austrian Triumph in Short Distance

22-year-old Austrian Lucie Böhm, a student in Stockholm who runs for Lidingö OK in Sweden and HSV Salzburg in Austria, was besieged by the orienteering press after winning the short distance final by 14 seconds over Hanne Staff. Winning one of the heats earlier in the day put Lucie into the last starting position, and she made the most of it, having the

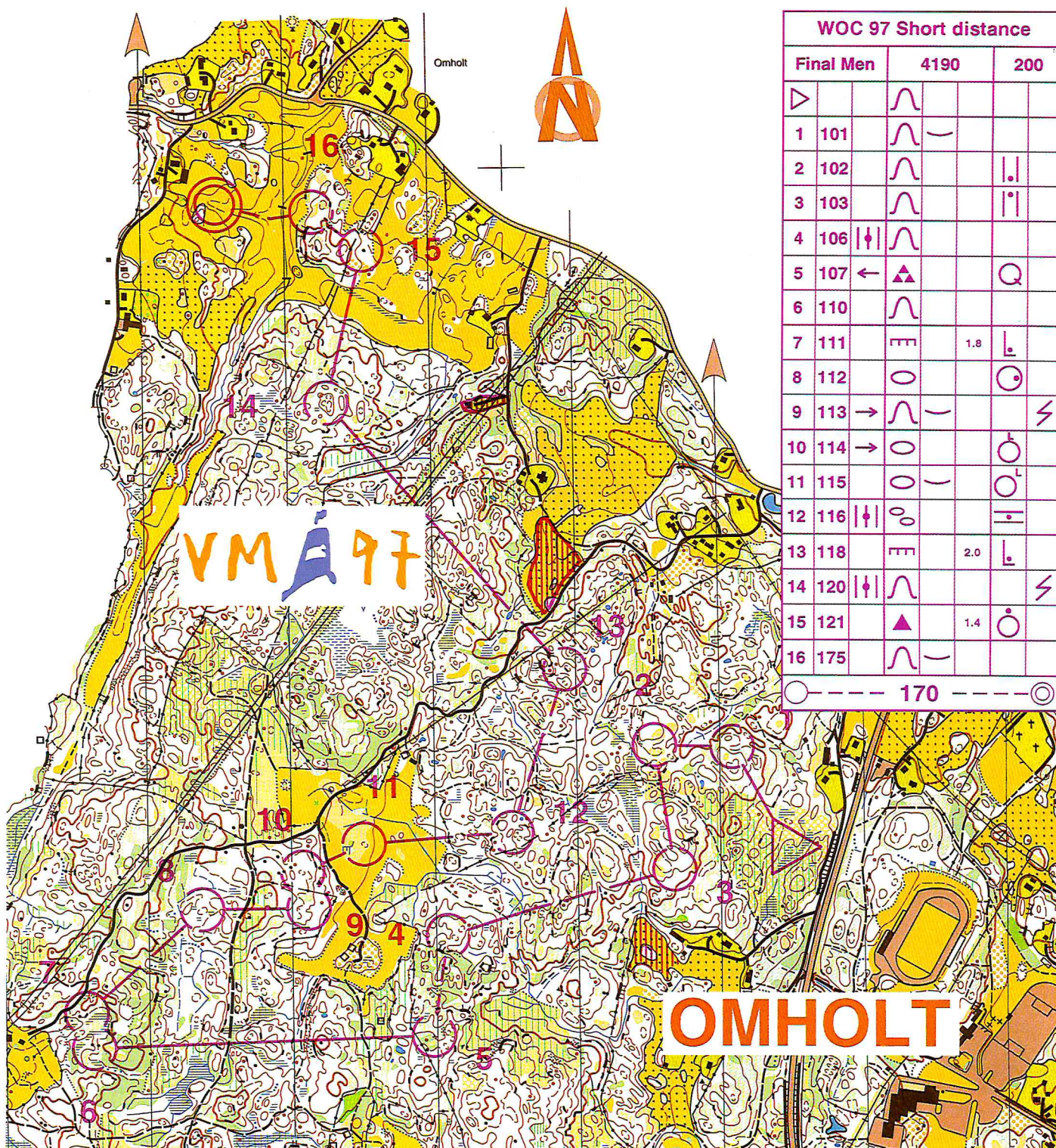
fastest overall time from the 3rd control onwards although she was not the fastest on any single leg.

The organisers had found a superb arena for this and the relay races two days later, an undulating field with a re-entrant for the run-in and views across to the final control - on a hill facing the finish - and to a field

across which the runners came to their final two controls. There was plenty of space for the large crowd of spectators, who could cross the lower part of the run-in by a bridge which at times became congested because it was such a good vantage point.

Apart from Tomás Prokes CZE, and Anna Garin ESP who was disqualified, all the top stars

made the final, although Heather Monro GBR scraped through in last qualifying place in the slowest heat after a 6-minute error. Vroni König SUI set a good time from an early start in the final which kept her in the lead for some time, but Cecilia Nilsson SWE bettered this by 46 seconds and looked a possible winner. However Marie-Luce Romanens SUI and



then Hanne Sandstad and Hanne Staff were all faster - but fastest of all proved to be Lucie Böhm.

Following a protest by the Swiss team leaders, the jury adjusted Hanne Staff's time by 1 second so that she shared the bronze medal with Marie-Luce Romanens. Their recorded times differed by 0.25 seconds and the back-up timing gave them the same time. The Swiss claimed that Hanne Staff had gained unfair advantage when the speaker 'counted down' her time as she ran towards the finish.

Jörgen Mårtensson was an early starter, but held the lead until after the race was half-way through. He described his run as "not optimal". Norway again showed very strongly with Petter Thoresen and Per Olaussen bettering Mårtensson's time, then Timo Karppinen FIN brought the lead time down by a further 33 seconds - would he be the winner? Tension and excitement mounted as both Bjørnar Valstad NOR and Janne Salmi FIN were announced with similar split times, and it was Janne Salmi who had the cleanest run at the end, appearing out of the forest with time in hand and a sprint up the run-in to win by 12 seconds. Valstad took the bronze medal.

Janne Salmi had prepared well for the Championships after an injury-ridden season in 1996, and his was a popular and well-deserved victory.



Gold medallist Janne Salmi, Finland,
in the finish photo: Kim Rud

Leading Results - Short Distance Final

Men, 4.2 km: 1. Janne Salmi FIN 26.05, 2. Timo Karppinen FIN 26.17, 3. Bjørnar Valstad NOR 26.27, 4. Per Olaussen NOR 26.50, 5. Petter Thoresen NOR 27.14, 6. Mikael Boström FIN 27.18, 7. Jörgen Mårtensson SWE 28.12, 8. Juha Peltola FIN 28.14, 9. Johan Ivarsson SWE 28.19, 10. Kjetil Bjørlo NOR 28.21, 11. Valentin Novikov RUS 28.44, 12. Steve Hale GBR 28.49, 13. Rudolf Roepke CZE 28.59, 14. Peter Jacobsson SWE 29.25, 15. Tarvo Avaste EST 29.34, 16. Thomas Bühner SUI 29.45, 17. Janusz



AVAILABLE NOW EMIT EPT START KIT

All you need to start using EPT. No need for clocks, computers or electricity (unless you want to).

The start kit contains 1 Mini Time Recorder with printer, 10 e-cards, 8 control units, 1 start unit, PC-program and 1 roll of backup labels.

Price NOK 11.950,-



**Software, EPT and timing equipment used
at WOC '97 in Grimstad supplied by Emit.**

Emit AS
Tollbugt. 6
N-0152 OSLO

Tel: +47 2242 3050
Fax: +47 2242 5553



Internet

E-mail: emit@emit.no
WWW: <http://www.sol.no/emit>

Porzycz POL 29.56, 18. Erik Aibast EST 30.06, 19. Vladimir Alexeev RUS 30.24, 20. Christoph Plattner SUI 30.26, 21. Thomas Kreici AUT 30.41, 22. Jimmy Birklin SWE 30.46, 23. Thomas Hjerrild DEN 30.49, 24. Alistair Landels NZL 30.51, 25. Jozef Pollák SVK 30.54, 26. Edgaras Voveris LTU 31.07, 27. Dominic Humbel SUI 31.28, 28. Grant Bluett AUS 32.08, 29. Alain Berger SUI 32.14, 30. Armo Hiie EST 32.17, 31= Svajunas Ambrasas LTU & Steve Nicholson GBR 32.22, 33. Stephen Palmer GBR 32.24, 34. Carsten Jørgensen DEN 32.34, 35. Tomas Zakouril CZE 32.47, 36. Yuri Omeltchenko UKR 32.51, 37. Warren Key AUS 33.03, 38. Tilo Pompe GER 33.12, 39. Chris Terkelsen DEN 33.25, 40. Sylvain Mougín FRA 33.36.

Women, 3.6 km: 1. Lucie Böhm AUT 25.15, 2. Hanne Sandstad NOR 25.29, 3= Marie-Luce Romanens SUI & Hanne Staff NOR 25.57, 5. Cecilia Nilsson SWE 26.11, 6. Johanna Asklöf FIN 26.32, 7. Vroni König SUI 26.57, 8. Brigitte Wolf

SUI 27.11, 9. Kirsi Tiira FIN 27.17, 10. Anna Bogren SWE 27.27, 11. Elisabeth Ingvaldsen NOR 27.36, 12. Gunilla Svärd SWE 27.54, 13. Yvette Hague GBR 28.20, 14. Sabrina Meister-Fessler SUI 28.36, 15. Anniina Paronen FIN 28.54, 16. Dorte Dahl DEN 28.58, 17. Ruth Vahe EST 29.18, 18. Torunn Fossli Sæthre NOR 29.23, 19. Irina Mikhalko RUS 29.41, 20. Maria Honzová CZE 29.42, 21. Frauke Schmidt Gran GER 29.58, 22. Marcela Kubatková CZE 30.30, 23. Katja Honkola FIN 30.40, 24. Tania Robinson NZL 30.45, 25. Tatiana Iaksonova RUS 31.04, 26. Heather Monro GBR 31.13, 27. Heidrun Finke GER 31.15, 28. Barbara Baczek POL 31.16, 29. Danute Månsson LTU 31.29, 30. Antonia Wood NZL 31.31, 31. Elo Saue EST 32.27, 32. Juliette Soulard FRA 32.28, 33. Kim Buckley GBR 32.40, 34. Merete Bigum DEN 32.41, 35. Tine Rasmussen DEN 33.02, 36. Olga Lepšiková CZE 33.12, 37. Barbara Tobler AUT 33.14, 38. Pam James CAN 33.16, 39. Zsuzsa Fey ROM 33.34, 40. Maret Vahe EST 33.39.

Danish Ecstasy after Shock Swedish Lapse

Danish national coach Olli-Pekka Kärkkäinen's 'dream team' provided him with the perfect farewell with a victory in the men's relay - but only after an astonishing lapse by Swedish third leg runner Jimmy Birklin, at a time when he held a clear lead, brought about Sweden's disqualification.

The first indication that something was wrong came when Birklin was not reported at the first radio control, and it was only after he finished that he found out that he had missed it altogether, running straight from control 3 to control 5.

With Sweden out of the way, a tremendous battle ensued between Allan Mogensen of Denmark, 1993 classic race champion, and Janne Salmi of Finland who had won the short distance gold medal two days earlier. Mogensen was 25 seconds behind Salmi at the second radio, but over the last 1.5km/7 controls Mogensen was the faster and overtook Salmi to win by 16 seconds.

The large contingent of Danish 'roligans' who had come to support their team erupted in noisy celebration of a win which has always seemed pos-

sible since Denmark's victory in the World Cup final in 1994.

Norway gained the bronze medals, but special mention should go to Ukraine, who were leading right up to the first radio control on the third leg before falling away to 7th place. Switzerland could not repeat the form which brought them three WOC relay golds in succession, finishing 5th.

The women's race was dominated by Sweden, who made up for largely disappointing performances in the individual races with a win by 1.15 over pre-race favourites Norway, with Switzerland an impressive third. The foundations for Sweden's win were laid by Anna Bogren and Gunilla Svärd, who set up a 5-minute lead over Norway by the end of leg 2. Fastest runs of the day on 3rd and 4th legs were not enough for Hanne Sandstad and Hanne Staff to pull back all the deficit, although they did overtake Switzerland who had been given a fine start by Brigitte Wolf.

Probably the happiest team below the medallists was Australia, who equalled their best-ever placing by coming 6th.



Trail O at WOC 97

Report by IOF Trail O Committee Chairman ANNE BRAGGINS

This was the fifth time that Trail Orienteering has been a part of the WOC programme, and this year the competitions were totally integrated into the public race days and included an open competition on 13th August. This was won by Olle Pettersson SWE with 17 points, time control 38 seconds, with 2nd Jan Erik Haug NOR 16 points, 35 seconds and 3rd Alexandre Kobzarev RUS 16 points, 39 seconds.

On 15th August the elite event incorporated a number of different competitions, most restricted to people with disabilities, although there was an open class which was tried by a number of people after their run in Foot O classes.

Included for individuals qualifying as disabled under the IPC rules was the 4th European Trail O Championships. This competition has been promoted by the IOF Trail O Committee as part of the development plan to encourage international competition in the discipline, as such an event may assist with funding for travel for some nations. The title holder is Tage Nilsson SWE, 16 points, 11 seconds, 2nd is Birgitta Rosberg SWE, 16 points, 22 seconds, 3rd Jan Erik Haug NOR 16 points, 25 seconds and 4th Jacques Eloy BEL 16 points, 41 seconds.

Team competitions, restricted to competitors with disabilities, featured the annual

Nordic Cup which allows for two teams of five per nation with the best four scores to count. Norway 1 won on home ground, followed by Sweden 2, with the Swedish first team taking 3rd place. In the international team competition, scored the same way, the results were Norway 59 points, Sweden 55, Great Britain 52, Denmark 43, Ukraine 42 and Belgium 38 (only 3 in team).

The most satisfactory aspect of the week was the amount of support, with 62 people pre-entered for the elite class and a further 5 for the B class, from 9 nations. People from at least another 6 nations tried parts of the open courses.

Future Events

It is planned to create an international event programme for Trail O. This can only be successful if information about events is sent in good time to the IOF Secretariat or to the Trail O Chairman at 90 High Street, Meldreth, Royston, U.K. SG8 6LB, fax +44 1763 261 961, e-mail vision@dial.pipex.com

The 1998 European Trail Orienteering Championships are to be organised from 31 July to 2 August by Peter Gehrmann in the Schloß Holte-Stukenbrock area of Germany, close to the areas used for WOC 95. Watch for further details!



Out on the course at the European Trail O Championships photo: Anne Braggins

WOC Snippets

Eileen Loughman of Ireland competed in her 12th Championships, a new record; she was selected for the first time at the WOC in Scotland in 1976.

Spectator numbers were high - an estimated 3,000 at the classic final, 4,500 at the short distance final and 6,000 at the relay.

Croatian competitor **Ivo Tisljar** arrived in Grimstad 5 minutes before the opening ceremony - having hitch-hiked part of the journey and missed his planned ferry crossing from Denmark.

Lucie Böhm's victory at short distance was witnessed by her father and mother, who wept tears of joy at the finish; the family had relaxed in the Norwegian mountains prior to the Championships.



A delighted Lucie Böhm speaks to the press immediately after her run

Chief mapper **Vidar Ydse** spent an estimated 400 hours on ground survey for the WOC maps.

Johana Mutisya and **Peter Mutua** came from Kenya to watch the World Championships and learn about the organisation and skills of orienteering. The new Kenya federation (not yet an IOF member) hopes to be organising its first competitions in December.

Geoff Peck, once star of the Great Britain team, ran for Hong Kong in Grimstad.

Three 18-year-olds competed: **Thierry Gueorgiou**, France and **Lesia Diatchenko** and **Irina Voronina**, Ukraine.

The Canadian team included three from the same family: **Will, Mike and Sandy Smith**. Three pairs of sisters competed in the Championships, and all reached the classic final: **Ruth and Maret Vaher**, Estonia, **Eniko and Zsuzsa Fey**, Romania, and - most well-known - **Kirsi Tiira and Johanna Asklöf** of Finland.

Svärd Wins Again in Park World Tour

Surprise victor in men's race

It was Sweden at the top twice when the fourth round of the 1997 Park World Tour took place in the presence of a crowd of 10,000 attending the Laxå 'Storfest' (big party) at the beginning of August, writes *Christer Svensson*. Gunilla Svärd won her third PWT race in a row, whilst Håkan Eriksson was the unexpectedly clear winner of the men's race.

This was Laxå's third year as venue for an elite park race, and course planner Tage Hammer set out 22 controls on the 3.49km course. The mapped area was changed a little from previous years, but the start and finish were in the central square as previously.

First starter Gunilla Svärd had a narrow victory by just 7 seconds over the other very consistent performer in this year's

Tour, Johanna Asklöf of Finland, with Katarina Borg (Sweden) 2 seconds slower in third place. A convincing 23 seconds was the gap between Håkan Eriksson and the second-placed Yuri Omeltchenko (Ukraine), last year's winner in Laxå; Carsten Jørgensen (Denmark) was third.

Autumn Finale in mid-Europe

The Park World Tour now moves on to a four-race sequence in October in the Czech Republic, Hungary, Austria and lastly the final in Venice. In the overall standings, Gunilla Svärd and Johanna Asklöf have a big lead over their nearest rivals and one of these two seems sure to take the title. And Carsten Jørgensen has established a 14-point lead over nearest rival Janne Salmi; when he gets the bit between his teeth, Carsten is hard to beat and he must be the firm favourite for the men's crown.

Park World Tour - Leading Standings after Race 4

Men

1. Carsten Jørgensen	DEN	73
2. Janne Salmi	FIN	59
3. Kjetil Bjørlo	NOR	51
4. Jörgen Mårtensson	SWE	49
5. Allan Mogensen	DEN	47
6. Yuri Omeltchenko	UKR	41
7. Petter Thoresen	NOR	37
8. Rudold Ropek	CZE	27
9. Gabor Domonyik	HUN	22
10. Chris Terkelsen	DEN	21

Women

1. Gunilla Svärd	SWE	88
2. Johanna Asklöf	FIN	80
3. Heather Monro	GBR	56
4. Hanne Staff	NOR	44
5. Marlena Jansson	SWE	38
6. Hanne Sandstad	NOR	31
7. Reeta-Mari Kolkkala	FIN	27
8= Dorthe Dahl	DEN	24
8= Külli Kaljus	EST	24
10. Marie-Luce Romanens	SUI	23



Külli Kaljus, Estonia, at the elevated last control in Laxå with Swedish TV paying close attention

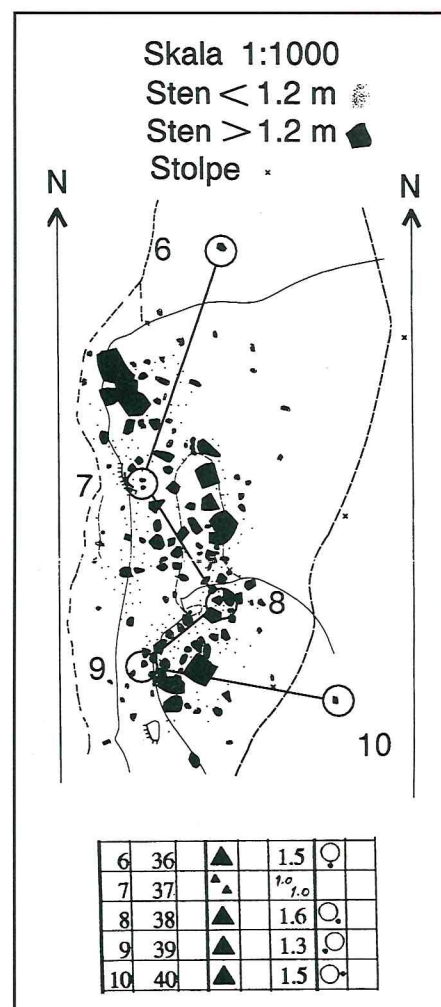
*photo:
Christer Svensson*

Right: a small area with many boulders was separately mapped at scale 1:1,100 (here shown slightly reduced)

Park World Tour race 4 - Laxå - Leading Results

Men: 1. Håkan Eriksson SWE 17.15, 2. Yuri Omeltchenko UKR 17.38, 3. Carsten Jørgensen DEN 17.55, 4. Janne Salmi FIN 18.04, 5. Per Olaussen NOR 18.05, 6. Jörgen Olsson SWE 18.06, 7. Jörgen Mårtensson SWE 18.11, 8. Chris Terkelsen DEN 18.14, 9. Bernt Bjørnsgaard NOR 18.21, 10. Kjetil Bjørlo NOR 18.26.

Women: 1. Gunilla Svärd SWE 21.12, 2. Johanna Asklöf FIN 21.19, 3. Katarina Borg SWE 21.21, 4. Marlena Jansson SWE 21.35, 5. Heather Monro GBR 21.40, 6. Anette Granstedt SWE 21.54, 7. Karolina Arewång SWE 21.56, 8. Lucie Böhm AUT 21.57, 9. Hanne Staff NOR 22.45, 10. Reeta-Mari Kolkkala FIN 22.51.



'Jögge' and 'Katta' Lead the Way at O-Ringen

Report by CHRISTER SVENSSON

The garlands on the run-in and the cheers of throngs of spectators were directed towards two of the most well known names in Swedish orienteering - Jörgen Mårtensson, 37, and Katarina Borg, 33 - on the final day of this year's Swedish O-Ringen 5-days, held around Umeå in northern Sweden. For both runners it was their third O-Ringen victory, 'Jögge' winning in '81 and '96 and 'Katta' in '87 and '94.

The presence of 2,000 foreign orienteers from 40 nations did not hide the disappointing overall attendance of only 11,000, the lowest since 1977. Korea was represented in the competitions, and at the traditional clinic arranged in conjunction with the 5-days the participants included representatives from Argentina, Kenya, Cyprus and South Africa.

New Elite Format

This year's event broke new ground, in that there was a park race for the senior elite on the day before the main start. The elite then had a rest day on the Wednesday; the final day was a chasing start. There was a high class elite field, although reduced by the fact that the World Championships followed shortly afterwards.

The park races, which were incorporated into the 5-days opening ceremony, were won by Jörgen Mårtensson and Marlena Jansson, the latter having just 3 seconds in hand over Gunilla Svärd, who is dominating this year's Park World Tour.

Exciting Final Day Finish

The final day's chasing start produced a more exciting race than expected. 'Jögge' had a start of 2.08, but made several mistakes in the early part of the course, so that his chasers - Håkan Eriksson and Lars Holmqvist - had caught up with him by control 10. He regained some advantage at the next-last control, and ran out the winner by 13 seconds over Håkan Eriksson, with Lars Holmqvist 30 seconds down.

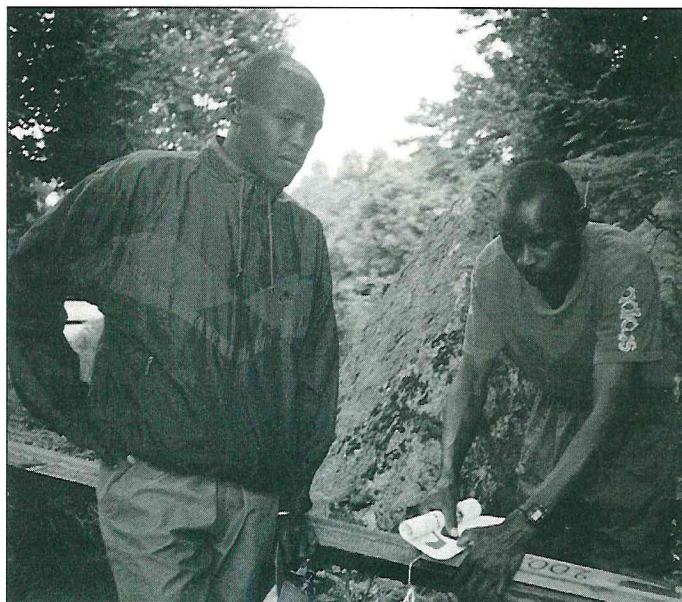
In the women's race, 'Katta' Borg extended her lead of 4.11 at the start to win by 8.46 over Gunilla Svärd, with Karolina Arewång third.

The 1998 O-Ringen 5-days, based on Gävle in Gästrikland, has World Cup status for the elite, the first time that a multi-day event features in the World Cup programme.



Unusual control site under a mill stream in the Laxå Park World Tour race. Sabrina Meister-Fessler, Switzerland is finding it difficult to keep dry

*photo:
Christer Svensson*



Two Kenyans, Peter Mutua and Johana Mutisya, attended this year's O-Ringen clinic in Umeå photo: Christer Svensson

O-Ringen 5-days - Leading Results

H21E: 1. Jörgen Mårtensson 215.29, 2. Håkan Eriksson 215.42, 3. Lars Holmqvist 215.59, 4. Mikael Wehlin 216.49, 5. Jörgen Olsson 221.19.

D21E: 1. Katarina Borg 197.51, 2. Gunilla Svärd 206.37, 3. Karolina Arewång 206.45, 4. Marlena Jansson 213.42, 5. Karin Craig 213.53.

Welcome to Norway

MODUM O-CAMP

For the last three World Champs I've done my final preparations at Modum O-Camp. They've got the best orienteering training opportunities in the world there.



In '97 it will be even more important to do the final preparations there, because of the WOC in Norway.

Several clubs, national O-teams and individuals have already booked training camps in 1997.

Modum O-Camp is situated 80km west of Oslo. 30 courses with controls set out in 1997. Various accommodation options.

MODUM O-CAMP
Bøen gård
3370 Vikersund Norway

☎ +47 32 78 39 66 ☎ +47 32 78 37 35
ELITE RECREATION YOUTH FAMILIES



SUE HARVEY'S *President's Column*

The IOF's Priorities for Development

The World Championship week brings together people from all over the world. It is therefore a natural opportunity for meetings in between the races. This year as usual the IOF Council and the IOF Committees met, as also the heads of national federations in the biennial Presidents' Conference.

The Conference gives the chance for discussion of important topics of the day. It is an advisory body. This year there were two topics, namely *Development towards the Olympics* and *PR and media*.



IOF President Sue Harvey addressing the Presidents' Conference photo: Clive Allen

The first session included an introduction, where I outlined the main actions necessary to take us forward on the road to Olympic Games programme inclusion. Briefly summarised these are:

1. **Increase the number of members of the IOF** - i.e. increase the geographical spread of orienteering (most of Europe and North America is already in membership).
2. **Strengthen the existing federations**, and ensure a burst of new orienteers there so that these federations are strong enough to lead and finance the campaign to achieve inclusion.

3. **Raise orienteering's profile** by increasing coverage in the media, in order to convince the sporting world (and the IOC) that orienteering is an appropriate sport for the Games programme.

4. **Develop the forms** of orienteering so that we have at least one that is suitable for the Games programme.

5. **Simplify the organisation of orienteering**. This will make it easier for new countries to get started, easier for media and media audiences to understand, easier for newcomers to begin in the sport in old countries - and less people to organise could help stop a drain on members in established countries.

These five are all connected. For example, in order to increase the membership we need money to spend on development. This money will probably be best obtained from commercial sponsorship, and to get it we need media coverage.

Or another example: to increase membership we need to have a variety of forms of orienteering, so that for each country there will be a form suitable for the available terrain and circumstances.

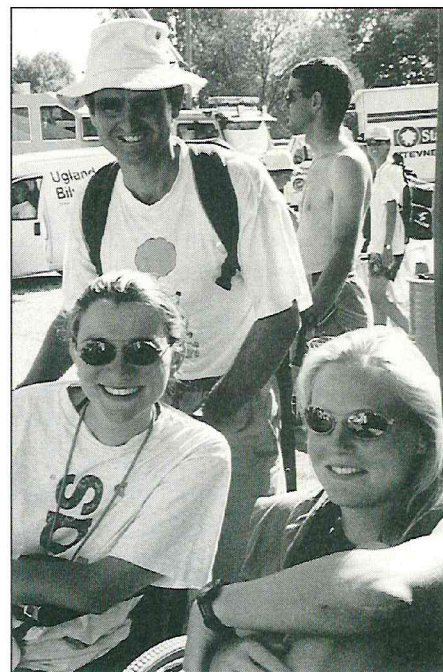
I stressed that these five are the route to development - and also to the Olympic Games. So I think they are objectives we can all wholeheartedly support.

After my introduction we talked in small groups and then had a general discussion. From this it is clear that there is a wide measure of agreement on the need for development, but a variety of opinions among national federation presidents about how to go about it and how fast to go. There is some resistance to change in the format of our events, though this is only natural until any proposals are clearly defined.

This session was followed by a tasty meal offered by the local mayor, including a very entertaining short history of the town of Arendal where the Conference was held.

Media Contacts - A French Success Story

The second topic of the Conference was designed to start work at once on one of the five aspects discussed in the earlier session: PR and media. It was organised in the form of a seminar, and led by France in the person of the FFCO President, Edmond Széchényi and the FFCO's professional media consultant, Christel Pernet.



From Greece to learn about the organisation and techniques of Foot O and Trail O were Anastasia Asteriou and Teodoros Petropoulos, pictured here with Great Britain Trail orienteer Karen Darke photo: Anne Braggins

This was a most instructive session and I hope that many federations will benefit from France's experience. Copies of the notes from the seminar can be obtained from the IOF Secretariat in Finland.

The Conference was well attended - some 55 participants from 28 countries.

A Plan to Achieve Progress

Two days later, the Council took up the discussion at its next meeting. On the Olympic question, Council decided that the President's Working Group would take responsibility for the next stage by establishing the plan to achieve progress in these five aspects. This will include a proposal for the format of the event we will seek to have included in the Olympic Summer Games programme. (For the Winter Games, an application for inclusion in the 2002 programme - Salt Lake City - has already been made. A decision is awaited.)

The action plan will be elaborated in the next few weeks, in preparation for consideration by the full Council.

Meanwhile the IOF continues to move towards its goal of 75 members - orienteers from Greece and Kenya were among the spectators at WOC 97. And what a spectacle it was! Congratulations and thanks to Norway and Grimstad, and congratulations to all the medallists. It was a memorable World Championships.

Decisions from IOF Council

Towards an International Marathon O-Event Programme

Early this year a questionnaire was sent out to all IOF member federations to evaluate the activity in marathon orienteering. Many replies speak of the growing popularity of 'extreme' orienteering, and a number of countries want to see international events in marathon orienteering.

Council agreed that marathon orienteering in its various styles is an established form of orienteering, and that therefore international activities in this field are part of the responsibilities of the IOF. The IOF should work towards establishing an international event programme (see also page 15).

Council decided to set up a working group with the task of setting up the event programme and working out details.

Park Events in IOF Event Programme

Park orienteering is an event form already recognised by the IOF, and there are many more events of this kind now being held in addition to the Park World Tour. This form of orienteering is also suitable for countries where other forms of orienteering are not possible.

The present Park World Tour concept includes elements that conflict with some IOF policies. The IOF will co-operate with the Park World Tour group so that a form in keeping with IOF practice evolves. A special task force will be created.

It was decided to include park events in the IOF event programme. The possibility of including park events in the IOF World Cup programme has already been discussed. Any future World Championships in Park-O will be part of the current Foot-O championships.

WMOC 2001 in Lithuania

The 2001 World Masters Orienteering Championships has been allocated to Lithuania. In 1999, the World Masters Championships in Ski-orienteering will be held in Russia, and the Junior World Ski-Orienteering Championships will take place in Bulgaria, subject to final agreements on terms.

WOC 99 Programme

The programme for the 1999 World Championships in Scotland which has been published in Bulletin 1 was accepted. The short distance races (qualification and final) will be held over 2 days, which is a deviation from IOF competition rules.

An application for **Trail O to be a demonstration event at the 2004 Paralympics** has been submitted.

A **Medical Advisory Group** has been set up to assist the IOF Doping Control Officer, Brit Volden.

The 1998 IOF Congress will be held in Sintra, Portugal from 7 to 12 July.

New Sponsorship Agreement Signed with Suunto

In July a new two-year sponsorship agreement between the IOF and Suunto was signed. Suunto became the official sponsor of the IOF in 1995, and the new agreement is the result of a mutually fruitful partnership during the past two years. According to the agreement, Suunto will also be one of the sponsors of the Orienteering Centenary.

IOF President Sue Harvey commented: "We are delighted to continue the partnership with Suunto. We have a lot of common goals and Suunto's support during the last two years has enabled us to carry out many of the development activities decided on by our Congress.

Suunto is continuously developing its activities in the field compass market and the IOF is interested in promoting orienteering in new countries and in increasing its membership.

Suunto has recently put a lot of effort into producing high quality education material which can be used when introducing orienteering into new countries".

"Suunto has enjoyed the partnership with the IOF and has already seen positive results from it. We look forward to continuing the co-operation", said Jorma Kallio, the President of Suunto Corporation.

International Orienteering Federation

Secretariat

Radiokatu 20, FI-00093 SLU, Finland

Telephone: +358 9 3481 3112 Fax: +358 9 3481 3113

Secretary General: Barbro Rönnerberg

IOF Council 1996-98

President

Sue Harvey, Great Britain

Senior Vice President

Åke Jacobson, Sweden

Vice Presidents

Hugh Cameron, Australia

Edmond Széchenyi, France

Council Members

Thomas Brogli, Switzerland

Higino Esteves, Portugal

Rimantas Mikaitis, Lithuania

Flemming Nørgaard, Denmark

Bruce Wolfe, USA

IOF Committees and Committee Chairmen

Foot-O - Geir Tveit, Norway

Mountain Bike-O - Jean-Paul Hosotte, France

Ski-O - Veli-Markku Korteniemi, Finland

Trail-O - Anne Braggins, Great Britain

Events Standards - Barry McCrae, Australia

Map - Björn Persson, Sweden

Technology Development - Finn Arildsen, Denmark

Member Nations

(* - associate members)

Argentina*	ARG	Ireland	IRL
Australia	AUS	Israel	ISR
Austria	AUT	Italy	ITA
Belgium	BEL	Japan	JPN
Belorussia	BLR	Kazakstan	KAZ
Brazil*	BRA	Korea	KOR
Bulgaria	BUL	Latvia	LAT
Canada	CAN	Lithuania	LTU
Chile*	CHI	Macedonia*	MKD
China	CHN	Malaysia*	MAS
Croatia	CRO	Netherlands	NED
Cuba*	CUB	New Zealand	NZL
Czech Republic	CZE	Norway	NOR
Denmark	DEN	Poland	POL
Ecuador*	ECU	Portugal	POR
Estonia	EST	Romania	ROM
Finland	FIN	Russia	RUS
France	FRA	Slovakia	SVK
Germany	GER	Slovenia	SLO
Great Britain	GBR	South Africa	RSA
Hong Kong	HKG	Spain	ESP
Hungary	HUN	Sweden	SWE
India*	IND	Switzerland	SUI
		Ukraine	UKR
		United States	USA
		Yugoslavia	YUG

Press Relations Seminar at Presidents' Conference

This year's Presidents' Conference was divided into two parts. The first part, 'Development towards the Olympics', is covered in Sue Harvey's *President's Column* on page 12. The second part comprised a highly interesting presentation by Christel Pernet, Public Relations Advisor to the French federation, who spoke on the subject 'Press Relations to Promote Orienteering'.

France has faced the problem common to many countries, namely a well developed sport which is very little known to the general public and to bodies such as local, regional and national authorities and private companies who might give subsidies and sponsorship. A few years ago the French federation took the bold decision to employ an external agency at a cost of 100,000 French francs per annum to create and implement a strategy to establish orienteering's image more widely.

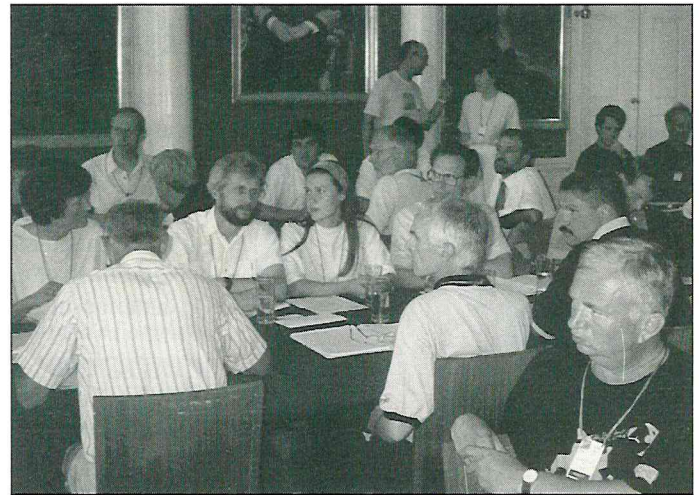
General Public First

It was decided to establish the image with the general public first before tackling the more specific question of elite sport. The identified attractions of orienteering (forests, wide open spaces, family sport etc.) were coupled with some of the aspirations of society ('return

to nature', exercising mind and body, etc.) to define the image which would be used in all messages to the press. It was necessary first to deliver the message to all orienteering officials and then to make sure they were all aware of the importance of transmitting an identical message to the media and the public.

An inventory was made of the different target groups (children, youth, older people, women etc.), and then press files were prepared where the themes in the files were adapted to each group. 150 press files are being sent out each year, and these have given rise to about 40 features per year in national papers, in magazines and on TV. Now, journalists have started to approach the agency for information rather than vice-versa.

In order to create a solid network of support among journalists, an annual public relations event in the form of an orienteering event for the press has been created. This is a social event where journalists are accompanied round the course by elite orienteers and members of the French federation's Council, and there is a large prize for the winner. This is seen as a very successful bridge-building operation.



Elite-O Promotion

This year, now that orienteering is much better known to the general public, the image of champions and elite orienteering is being promoted. Very detailed files on the elite squad are circulated to the press, and press releases are sent out regularly after major events. A very valuable communications tool is the use of a leading athlete, someone who has a likeable personality and communicates well, as the regular 'front person' for the media.

Christel emphasised that a press file must always be truthful, accurate and objective, giving the journalist the desire to know more; elite files are sent out shortly before the competition season. At the beginning of each year, a certain number of events are chosen as 'media support tools', to put the spotlight on particular aspects of orienteering. A few well mediated

events are worth much more than many different events that disperse the interest of the media. 4 or 5 events each year, covering all O disciplines, are at present the maximum number for getting the press to come - in 1997 a major O-marathon, the French 5-days, WOC, and the international MBO match have been chosen. One must not drown the press with information; a good selection of news is much better.

Some good advice: it is important which papers you appear in, not how much paper! Personal contacts are the key to success here. Christel has visited editorial offices to 'sell' the sport with enthusiasm, and a special video has been made to help in this work. It is important to speak directly and tell the truth!

'A Worthwhile Investment Risk'

The French federation considered this initiative to be 'a worthwhile investment risk', and it seems to have proved more than worthwhile so far. The professional was chosen very carefully! Christel pointed out that the strategy and messages are based on the French life-style and media outlook, but I am sure many presidents left the conference feeling that there was a great deal they had learnt from the French experience which could be applied in their own countries.

Detailed notes from the seminar are available free of charge from the IOF Secretariat.

Clive Allen



The IOF's sales and display site at the finals venues, shared with Suunto, was a garage loaned by a local manufacturer. Top picture: the Presidents' Conference in session photos: Clive Allen

Meetings in Grimstad - New Technology and Mapping Standards

A New Generation of O-maps

Map makers from all over the world gathered at Grimstad just before the World Championships for the 7th International Conference on Orienteering Mapping. The two-day conference discussed technical developments for map making and the next generation of maps for orienteering.

The use of electronic methods for monitoring runners in the forest, putting new demands on map accuracy, and the fact that almost all maps today are made using computers, make this an appropriate time for revising the IOF map norms.

"The problem we are facing is to cover the most extreme terrains in the world within the same set of symbols and signs", said IOF Map Committee Chairman Björn Persson. "We expect requirements for maps in new terrain types unknown to orienteering, for example in Africa and South America".

The revision is proceeding to an agreed timetable and is likely to lead to changes in items such as dot screen density, where the dot % can be varied at will using a computer.

The committee is responsible for mapping standards for all disciplines of the sport, and international standards for MBO maps are likely to be set in due course.

Slow Progress with New Tracking Systems

The audience at the Technology Development Committee's open meeting in Grimstad heard progress reports from those developing new systems for tracking competitors. Unfortunately it seems that it will be a year or two yet before a system is fully operational which has little burden for the runners and good enough accuracy for practical application in TV broadcasting.

The Silva Time-track System works by measuring the time taken for a signal transmitted from a runner to reach a minimum of three base stations whose physical co-ordinates (positions in the forest) are known exactly. The data from the base stations goes to a master station in the finish area for analysis, with open interfaces to other computer systems. Clock accuracy is very crucial with this system, and at present the 4 full-time workers on the system are achieving position accuracy to within 70 metres. However 10 metres is the goal; valleys and hills affect accuracy because the maths being used is '2-dimensional'. The runner's transmitter currently weighs 230g, but it is anticipated that this will be reduced. The system can cope with up to 4,000 runners at one time. Some test events are provisionally planned for next spring.

Veopos, the Norwegian company working on positioning systems based directly on GPS, claims to have a prototype unit giving accuracy to within 5 metres, but the runner's pack weighs 1kg. However they have been working primarily on graphical presentation for TV in the past year and don't see the further development of their positioning system as top priority. There seems to be scope here for a link, allying Silva's positioning technology with Veopos's graphics.

O-Database on Internet

Another presentation at the meeting was made on behalf of N3 Sport AS, a Norwegian company which has created an orienteering information exchange service on Internet, including registration of events (without cost), entry services, results, lists, statistics, rankings, payment services and graphic presentation. At WOC 97, where all results were posted on the site within 30 minutes of the last finish, the site recorded 30,000 'hits' per day. The site is www.n3sport.no, e-mail n3sport@winsoft.no.

The final presentation was given on behalf of SPORTident®, the German electronic punching system described in OW97/2, page 15.

Britain's National Orienteering Magazine

COMPASS

Holiday Orienteering 1998

Organisers! Arranging a multi-day or other holiday orienteering event next summer? Please make sure *CompassSport* has details of your event.

A basic ("classified-style") listing is free of charge in our 1998 *Holiday Extra* to be published January 1998. For extra impact display advertising is available at reasonable prices.

Enquiries to the address below. Details of subscriptions to *CompassSport* can also be obtained from this address. Check our web site for details of our mail order book service - many orienteering titles in stock eg *Get Fit for Orienteering* GB £9.95 plus postage (UK - £1.00, Europe £1.80, Overseas Airmail £3.50) Visa/Mastercard accepted.

CompassSport, 37 Sandycroft Road, Twickenham, TW1 2LR, England.

Tel: +44 181 892 9429 Fax: +44 181 255 0762

e-mail: compass.sport@dial.pipex.com

www: <http://dial.pipex.com/compass.sport>

P
O
R
T



Long Distance Orienteering and the IOF

Long-O in its various forms - raids, rogaines, mountain marathons and straightforward long distance O-races - is increasing in popularity in many of the IOF's member nations.

Rogaines originated in Australia and are also held in New Zealand, Canada and USA - the concept of the rogaïne was fully described in OW 94/4 - and moves are afoot to form an official International Rogaining Federation.

The IOF sees some benefits

in having all forms of orienteering under one umbrella, the advantages including liability insurance cover under the existing orienteering policies, a single affiliation fee, only one membership fee for regular orienteers and long-O enthusiasts, and world-wide recognition of long distance orienteering encouraging the spread of its various forms to new countries.

As noted on page 13, the IOF has decided to set up an international programme of marathon events.

Sweden Scores in JWOC

PETR HRANICKA reports on a hard struggle between Swedish and Finnish juniors to win the JWOC Nations Cup which was finally decided in the relay competition

Leopoldsborg, city of 15,000 inhabitants in Belgium, hosted 303 young runners from 35 countries this July for the 8th Junior World Championships. This city was chosen as the event centre not only for the interesting O-areas in the region, but for ideal options for cheap, simple but good accommodation for all nations in the same place - in military blocks with large rooms, with very good possibilities for meetings, collective boarding, washing, clothes drying, other sports activities during free time etc.

All competitions were held not far from Leopoldsborg in totally different terrain from last year's JWOC in Romania. Here it consisted almost exclusively of sand plains and dunes producing intricate contour detail, mostly covered by vegetation, but with very good visibility. There were some patches of deep open sand. In all areas there were numerous paths, tracks and roads, some new; the areas are still used for military purposes. Of course, new maps were made especially for the JWOC, all in scale 1:10,000 with 2.5m contour interval and in quite good quality.

Fast Short Distance Races

For the first time in JWOC history, the short distance consisted of semi-finals and finals on the same day, to give the possibility of a 2 minute start interval in the final races. The same finish area was built for both races; the qualifications were in the north part of the map and the finals in the south part. The results of the semi-finals (started with 1 min. interval) gave the first opportunity to compare the quality of the competitors, although this race was in the easier part of the area. No favourite dithered and probably every ambitious competitor was placed in the first

20 (maybe only the Finn Riina Kuuselo was not).

For the final race a much more broken and hilly sandy terrain was used, and two spectator controls in the open area around the finish made the competition very interesting. One was about 200m away, with good visibility and with report of split times, and the second, the last one on the course, about 4 minutes after. In the women's event Hanne Heiskanen (FIN) was leading for a long time in 24.17 starting from 15th semi-final place, but the two last starters brought excitement to the finish area: Simone Luder (SUI) with 30s best time at the spectator control, but two mistakes of 50s and 30s in the final part of the course moved her down to 6th place. On the other hand Katerina Miksova (CZE), 5th at the spectator control, finished as fast as Heiskanen and got the second best time 24.43, just 3 seconds better than Heli Jukkola (FIN) in third place.

In the men's event it was a fight for seconds. At a speed of

4.42min/km (the best women had 5.47/km) the fastest - and the happiest, with the gold medal - was Jørgen Rostrup (NOR) in 23.31, only two seconds faster than two Swedes with the same time for silver, Per Oberg and Rikard Gunnarsson.

Difficult Classic

After a sunny rest day, the classic distance race was prepared in a well known (last competitions were here only two years ago) and small but difficult area of about 4 sq. km, where a map exchange near the finish area was needed. The event started early in the morning, and we waited for 5 hours on a hot sunny day for the top runners in the last start group.

This was the most difficult terrain, with many contour details and difficult courses, especially the second part of the women's course. There was no easy control point, and mistakes were counted not in seconds, but in minutes. Many runners with a good time at the map exchange came to a sticky end.

Soon after the start a very good time, 57.28, in the women's event was set by Riina Kuuselo (FIN), thanks to a sound run after the map exchange. In almost 3 hours nobody better came to the finish, and many times the speaker said her name as the best girl, but the final group moved Riina to an unpopular 4th place. The first to beat her was Hanna Heiskanen with a time of 54.42. But the Swiss girls weren't in the finish yet, with very good times at the map exchange. As was a little expected, the fastest of all the girls was Simone Luder in 53.36, securing gold with 66 seconds ahead of Heiskanen. Regula Hulliger (SUI), running in a time of 56.00 for 'only' bronze, had 7 best split times from the 17 controls!

In the men's category experts predicted a winning time of about 60 minutes. A surprise came half way through the race, when Slovak Marian Davidik ran the course in 64.10. For more than one hour it was the leading time, with many favourites slower, but not Johan Modig, SWE, silver medallist of the '96 short distance JWOC. He had the best intermediate time, and he ran the second part as well as the first to beat Marian by more than 3 minutes in 60.51. But 50 competitors were in the forest yet, and he had to wait more than 90 minutes for the certainty of a gold medal. Vladimir Lucan, CZE, had the second best time at the map exchange, and with 7 best split times of 25 controls, but with two 1 min. mistakes in the second part, he came to finish for the silver medal in 63.33. Marian took the bronze medal.

Great Relay for Swedish Teams

As always, the most interesting competition is the relay. 53 men's and 46 women's teams started into sandy, open forest. At the end of the first leg the first 3 women's teams (Sweden, Czech Rep. and Norway) were leading 3 minutes ahead of the rest! From the second leg the Swedish team was alone. Second place went to the Czech team; third place, but by JWOC rules without medals, went to



Johan Modig SWE and Simone Luder SUI,
gold medallists in the classic race photos: author

the second Sweden team, so bronze was for the Swiss team with Simone Luder on last leg.

There was a similar situation with the second national team in the men's race. The two Swedish teams took first and second places with minutes of advantage, but only for one medal. At the end of the first leg it didn't appear so good, as the first 10 teams were separated by just 20 sec. Third to finish but for the silver medal ran the silver classic medallist Vladimir Lucan for the Czech team, only a few seconds ahead of the ambitious Slovak team.

Thanks go to all the organizers from Belgium and to army help, led by the Herreman family. All participants were satisfied, whether they were first or last in the results. No basic problem was visible from outside, the weather was nice, and there was a friendly atmosphere, especially at the closing banquet. There was no one dominating athlete such as Christina Grøndahl, Gabor Domonyik or Enikő Fey as in recent championships, and this year you can choose between Johan Modig with two golds from classic and relay and Hanna Heiskanen with short gold and classic silver.



Gold medals for Sweden in the women's relay

Is She the Youngest IOF Medallist?

asks PETR HRANICKA

Name: Vendula Klechova.
Born: 26th February 1981, so she is 16.

A certain nomination for the Czech Junior O-team for the 1997 Junior World Championships in Belgium, being for some years the best runner in the Czech O-Cup in her category and comparable with the best of the older girls.

She studies sport at the O Gymnasium in Jilemnice in the north of Bohemia, but her home is in Moravia, in the small town Horní Benesov in the Jeseníky mountains. Her coach is Martin Kral - a sports teacher in her O Gymnasium and also coach of the Czech national girls' junior team.

In the last JWOC competition in Belgium - the relay - she was somewhat surprised to find herself taking over from her first leg runner in second place. And she managed to retain this position throughout her leg, running faster than the junior



stars from Norway, Finland and Russia. And when the last leg runner finished in the silver medal position, Vendula became probably the youngest medallist ever in an IOF competition: a very good start to her international career!

She can repeat her success in the next four JWOC's, and hopefully achieve a gold medal in the year 2000 when the JWOC will be held in her home country - the Czech Republic.

The photo shows Vendula approaching the finish in the short distance final.

JWOC Leading Results

Short Distance Final

Men, 5.0 km: 1. Jørgen Rostrup NOR 23.31, 2= Rikard Gunnarsson SWE & Per Oberg SWE 23.33, 4. Jonas Pilblad SWE 23.53, 5. Claus Bobach DEN 24.04, 6. Hubert Klauser SUI 24.29, 7. Ilkka Leppavuori FIN 24.39, 8. Sigmund Gould GBR 24.45, 9. Troy de Haas AUS 24.46, 10. Sami Hamalisto FIN 24.55.

Women, 4.2 km: 1. Hanna Heiskanen FIN 24.17, 2. Katerina Miksova CZE 24.43, 3. Heli Jukkola FIN 24.46, 4. Karolina Samuelsson SWE 25.00, 5. Tatiana Pereliaeva RUS 25.01, 6. Simone Luder SUI 25.06, 7. Eva Jurenikova CZE 25.36, 8. Emma Engstrand SWE 25.38, 9. Elizaveta Kouznetsova RUS 26.07, 10. Eniko Fey ROM 26.24.

Classic Distance

Men, 11.92 km: 1. Johan Modig SWE 60.51, 2. Vladimir Lucan CZE 63.33, 3. Marian Davidik SVK 64.10, 4. Mats Troeng SWE 64.28, 5. Jørgen Rostrup NOR 64.35, 6. Per Oberg SWE 65.25, 7. Jonas Pilblad SWE 65.37, 8. Michal Horacek CZE 66.03, 9. Corsin Caluori SUI 66.15, 10. Samuli Salmenoja FIN 67.01.

Women, 7.82 km: 1. Simone Luder SUI 53.36, 2. Hanna Heiskanen FIN 54.42, 3. Regula Hülliger SUI 56.00, 4. Riina Kuuselo FIN 57.28, 5. Jenny Johansson SWE 57.49, 6. Eva Jurenikova CZE 58.04, 7. Paula Haapakoski FIN 59.02, 8. Katerina Miksova CZE 59.27, 9. Ksenia Kazymova RUS 59.31, 10. Sofie Herremans BEL 60.21.

Relays

(countries' second teams to finish omitted)

Men: 1. Sweden 1 2.09.42, 2. Czech Republic 1 2.14.34, 3. Slovakia 1 2.14.51, 4. Norway 1 2.14.55, 5. Ukraine 1 2.14.58, 6. Finland 1 2.15.31, 7. Switzerland 1 2.16.09, 8. Germany 1 2.18.20, 9. Lithuania 2.18.23, 10. Denmark 1 2.19.29.

Women: 1. Sweden 1 2.06.59, 2. Czech Republic 2 2.10.47, 3. Switzerland 1 2.11.33, 4. Russia 2 2.16.23, 5. Finland 1 2.17.17, 6. Norway 1 2.17.32, 7. Estonia 2.21.11, 8. Hungary 1 2.25.05, 9. Ukraine 2.29.35, 10. Germany 1 2.29.47.

Another International Elite Ranking List

DAVID ROSEN offers an alternative to Bo Simonsen's World Orienteering Rankings which are currently being trialled by the IOF Foot-O Committee

In *Orienteering World* 96/4 I published details of a scoring formula for use at multi-day events. This gives 1000 points to the average time on the course, and awards (pro-rata) 200 points for each standard deviation faster than the average:

$$\text{Competitor's points} = 1000 + [200 \times \frac{(\text{Average Time} - \text{Competitor's Time})}{\text{Standard Deviation Time}}]$$

At a multi-day event, the standard of competitors does not vary much from day to day. However the World Ranking Events may have a wide variation from event to event and therefore the standard has to be measured in some way in order to adjust the points scored.

This standardisation is easily achieved by calculating the average ranking points per event scored by the ranked competitors attending the event. Suppose that the event in question has a particularly high-class entry and that their average ranking points is 1100.

1100 is 100 points (equivalent to half a standard deviation) more than the 1000 point average. This indicates that the average time of the ranked runners at the event will be half a standard deviation faster than the average time if the standard range of ranked runners had attended. So if the standard deviation time is 8 minutes, and the average time of the ranked runners is 75 minutes, the standardised average time is 79 minutes.

Written as a formula, this is:

$$\text{Standardised average time} = \text{Average Time of Ranked Runners} + [(\text{Average Ranking Points} - 1000) \times \text{Standard Deviation}/200]$$

The standardised average time is then simply used instead of the average time in the original formula.

This scoring formula is mathematically logical and avoids the distortions associated with the Simonsen method.



International Ski Orienteering Competitions

28-31 January 1998

Co-Promoter: The Organizing Committee for the XVIII Olympic Winter Games, Nagano 1998



Enquiries

Fax: int+81-268-74-2353

E-mail: ski-info@orienteering.com
(VYE01114@niftyserve.or.jp)



The NAGANO Olympic Festival of Culture and Art

International Cultural Festival in Sanada-Sugadaira

28-31 January 1998

Sanadamachi Sugadaira Organizing Committee
for the International Cultural Festival



Mountain Orienteering in the French Alps

Mountain marathon orienteering events are already well known in countries such as Great Britain and Switzerland; in countries such as Australia and USA, somewhat similar events are known as rogaines. In France, this type of event is called a Raid, and here DENIS ROUSSET describes their growing popularity

The orienteering mountain marathon is on the up. The second Raid-Millet Altitude took place during the weekend of June 28/29 among the mountains of Serre-Chevalier, gathering together almost 700 participants. Altitude was certainly a key feature here - start altitude 1,900m, highest point 2,500m, bivouac altitude 2,000m.

The race is open to all and gathers together athletes from different backgrounds (marathon runners, orienteers and mountain walkers). Competitors came to the village of Monetier-les-bains from all over France and from Belgium, Britain, Germany, Italy, Spain and Switzerland.

Robert Monschein, a member of the French national orienteering team, made the map (conforming to IOF rules, scale 1:20,000) and planned the courses. The quality of the map ensured a high degree of readability of tiny details for competitors choosing their routes.

There was a total of five classes for the teams of two to choose from, ranging from the A class with 42 km and 1,800m ascent to class E: 20 km, 800m ascent.

Before the start there was a compulsory check of rucksacks. The equipment list contains certain compulsory items which are applicable to all teams, but there is no minimum weight. Consequently the sacks vary greatly in weight and size, from those equipped with the lightest of lightweight equipment to those who look equipped to

spend a week in the mountains.

After the rucksacks were checked, everybody took the free chair-lift ride offered by the Tourist Office to the top of Chanteloube. There the crowd sat in the sunshine waiting for the mass start of the race. A brief blast on the whistle, and the racers followed a blazed trail for a few hundred metres to the point where they collected their 'travel document'. This was a list of checkpoints with their definitions and identity number. Each checkpoint was then precisely located on the map by its geographic co-ordinates.

The hard work began as everyone climbed the steep Alpine valley. Finally after 600m of climbing the path crossed the Col de l'Eychauda. The path was not easy and required the competitors to have the necessary physical fitness for this kind of effort. The view at the top, from the summits of 'la barre des Ecrins', was superb recompense though for the participants. "The landscape may be beautiful, but I mostly appreciated the panorama from the bivouac, because during the race there is little time to admire the views" admitted Patrice, a member of one of the winning teams.

At the campsite only water is provided; competitors have to carry their own food. By mid-afternoon the first tents were installed just before the rain arrived, in the middle of an Alpine pasture. Medical assistance was available to help cure minor



ailments, alongside masseurs and physiotherapists to alleviate the aching muscles.

Evening entertainment was provided by a group of Alpine horn musicians playing their echoing melody for one hour. As night fell, silence descended over the campsite as everyone fell asleep for a few short hours, lulled by the constant sound of rain-drops.

Sunday morning 5.30 a.m. the alarm clock rang - cow bells rung by the organisers. It was still raining; at least it wasn't cold and snowy! At 6.30 the winners of the first day set off in the chasing start, with the intention to be first across the finish line in order to be sure of their place on the podium.

The first arrivals reached the bottom of the slope at 9 a.m., and after the last run across Pre Chabert, the winners had arrived. Throughout the morning the rest of the teams returned to Monetier-les-bains, tired and exhausted but happy to have completed an adventure off the beaten track in the Alpine environment. The combination of skill, strength and sheer force of will could be seen in the winners as they received their Gore-tex jackets, sleeping bags or garments donated by Millet. The sunshine did return in time for the prize-giving ceremony of course!

"These types of orienteering marathons are becoming more and more popular, why not 2,500 competitors next year," joked Marc Sinibaldi, the Raid Director. The best example of this growing popularity was the presence of Lucien Faure, the Director of the Tourist Office at l'Alpe du Grand Serre (near Grenoble) who has already agreed to the organisation of the 1998 Raid Millet in that area.



Setting out into the mountains (top); planning the day's route (above) photos: author

The Early Stages in the Development of Orienteering Maps in East Germany

by HARALD GROSSE

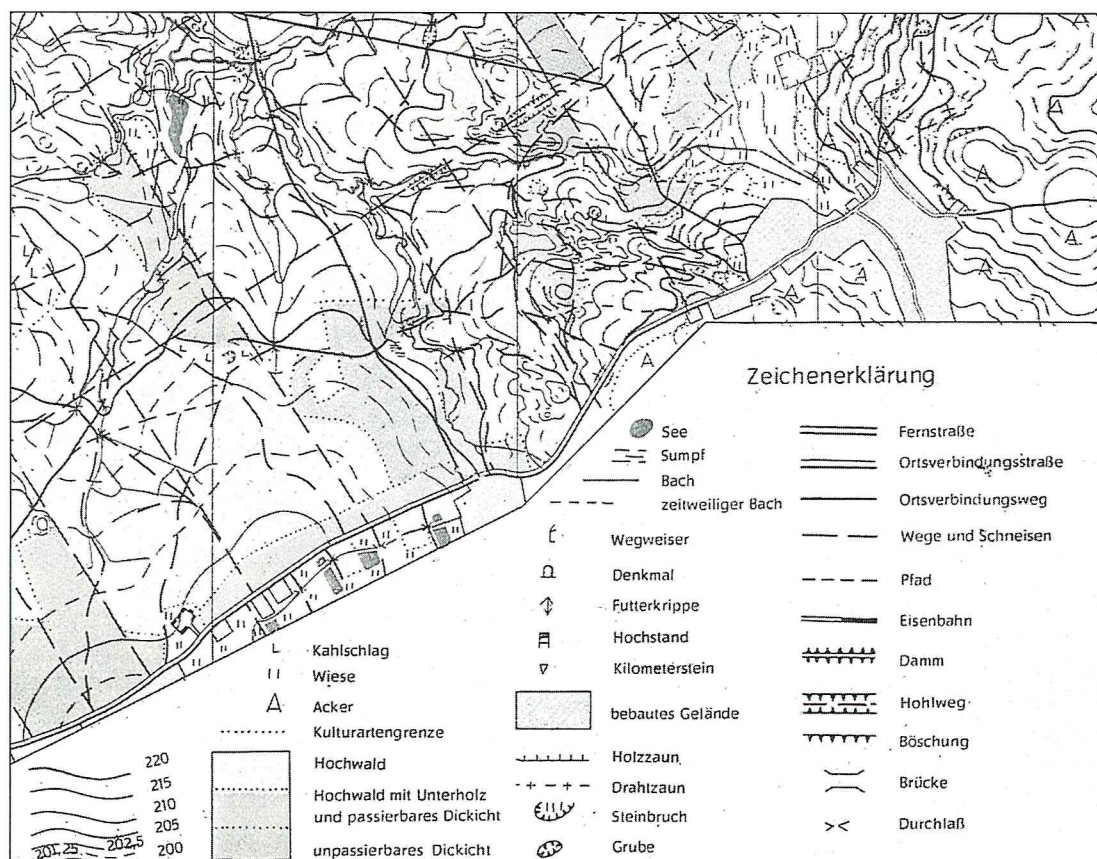
Dresden was, in the former East Germany, one of the most important centres in orienteering. The first clubs (TU Dresden, Dynamo Dresden, Medizin Dresden, Lok Dresden and others) were founded about 1960. The sport at that time was named Touristischer Mehrkampf ('touristic multi-competition').

In 1964 in Dresden, Saxony the first multi-coloured special maps for orienteering outside Scandinavia were created. In this area the norms for O-maps were created which are almost valid today. The symbols used were not selected from maps in use at that time, but from the Saxonian topographic maps which originated before 1900.

- | | |
|--|------------|
| | felsen |
| | grube |
| | steinbruch |
| | böschung |
| | damm |
| | graben |
| | quelle |
| | denkmal |



Part of the map of Moritzburg (above), scale 1:25,000, made in 1964, with some of the symbols used



In 1965 the same group of orienteers used for the first time three different shades of green for classifying vegetation: the map of Dresden Heide (left) is at 1:25,000 with 5m contours - with 3 form lines allowed between each pair of contour lines.

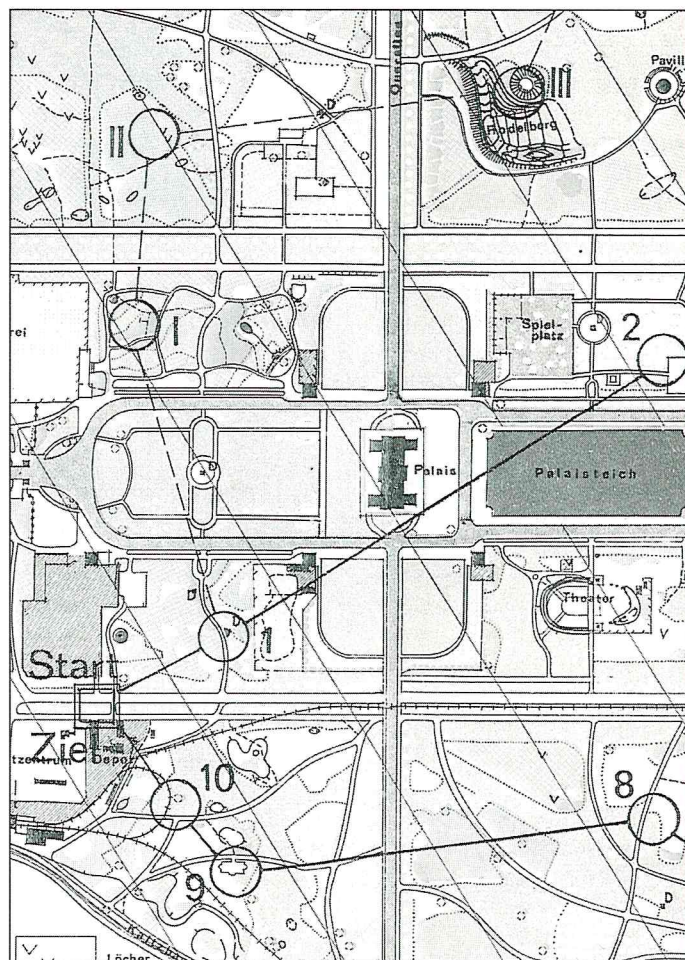
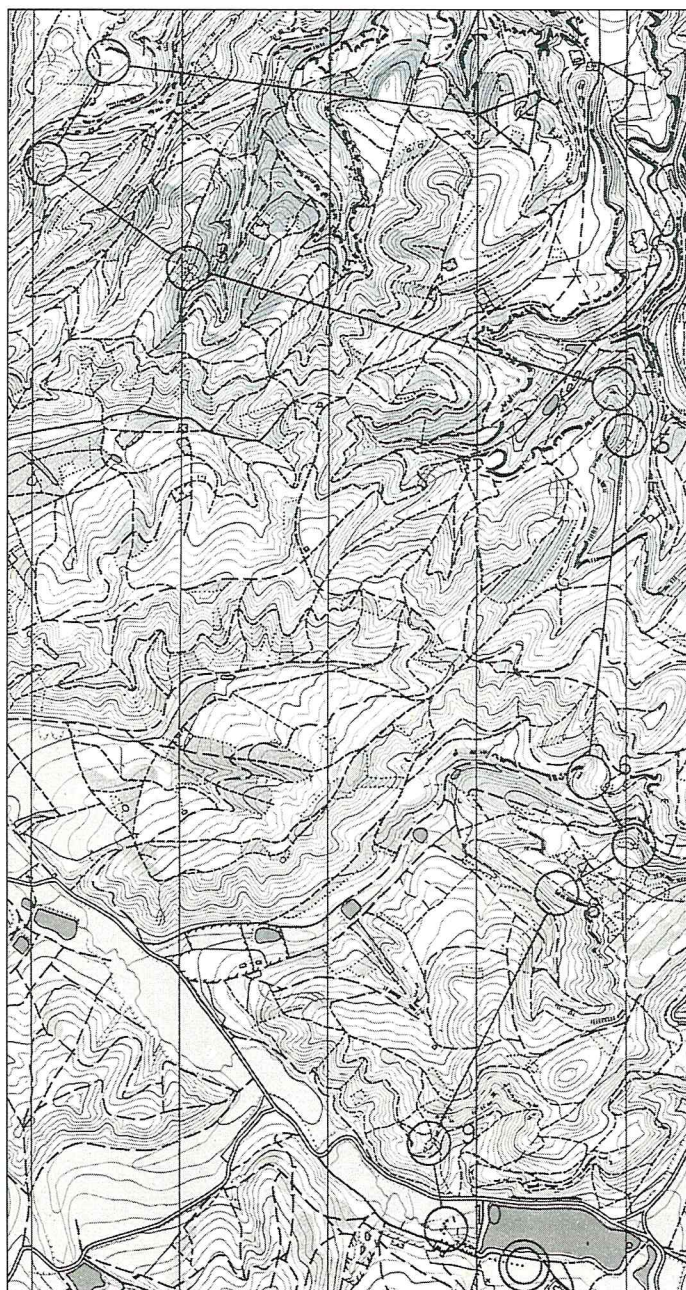
Park Races in Dresden - 21 years ago!

In 1975, to popularise orienteering, the first special map of a park in Dresden (right) was made to a large scale - 1:5,000. In the first competition in 1976 (a so-called 'Volksorientierungslauf') more than 2,000 people participated over 2 days; the youngest were still sitting in prams!

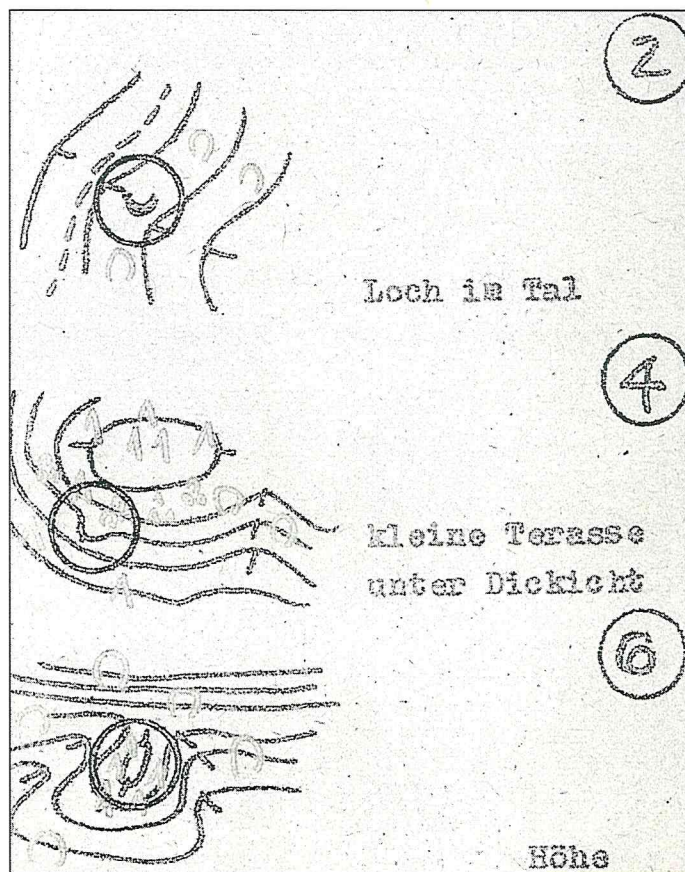
The 1970 World Championships

The absolute top point in the orienteers' work in East Germany was the World Championships in 1970 in the mountains of Thuringer Wald. The maps were drawn as so-called blue-copy before printing. It was only with great difficulty that the map-makers were granted a deviation from the IOF map norms, which had only been agreed shortly beforehand; these norms had not taken into account the dense net of paths and roads in middle Europe and thus the high proportion of black on these maps. The IOF Controller, Ib E. Nielsen from Denmark, turned a blind eye to enable the map drawers to classify all paths and roads downwards by one grade.

The map below (1:25,000, 7.5m contours) shows the women's individual course.



The first use of symbols for describing a post's location occurred in 1968 during the International Cup Orienteering (Interpol). These were not pictograms, of course, but enlarged details from the map. Three of the symbolic descriptions are shown below.



The First O-events in the USA

The first orienteering in the USA was not in 1946 (as stated in OW97/4 page 9) but in 1941, write Larry & Sara Mae Berman, Editors of *Orienteering North America*. Piltti Heiskanen, then a 29-year-old Finnish army officer serving as Director of Recreational

Skiing at Dartmouth College at Hanover, New Hampshire, hosted the first known orienteering meet in North America there on 20th November 1941. Heiskanen felt that O as practised by the Finns had "the makings of a popular American sport".

Embargoed Areas for 2001 Ski-O World Championships

A map showing areas around Tampere, Finland which have been declared out of bounds until after the 2001 Ski-orienteering World Championships has been issued. In those areas, skiing on marked public skiing tracks is allowed except by potential WOC 2001 competi-

tors and their trainers. Limited use of an area just east of Tampere will be allowed with permission of the WOC 2001 Organising Committee under guidelines approved by the IOF Controllers. A copy of the map can be obtained from the IOF Secretariat.

Ski-O News from Australia

Ski-O News is an 8-page publication from the Orienteering Federation of Australia, prepared by Ian Baker. Nine ski-O events are being held this winter, in New South Wales and Victoria, and two 'snogaines' organised by rogainers.

The OFA is keen to see Australia represented at the 1998 World Ski-O Championships in Austria and at the Ski-O Demonstration Event at the Winter Olympics in Japan.

CALLING ALL EVENT ORGANISERS!

The December issue of *Orienteering World* will again carry a full list of the major single and multi-day events taking place around the world in 1998. There will be discount advertising rates in the December and February issues for events, and an extra discount if your advert. also goes into the pre-Christmas issue of *CompassSport*, the British national O-magazine with world-wide circulation.

Contact the Editor now for cost details and to book your space!

Final copy date for advertising - 17 November

10° SYLVESTER-5



LEOPOLDSBURG
BELGIUM

26-30 DECEMBER 1997

10th 'SANTA CLAUS' 5-DAYS

5 Days Orienteering 5 Etaps All IOF Classes

Info: Sylvester-5 1997, VVO
Heidestraat 100, B-3581 Beringen, BELGIUM
Tel+Fax: +32 11 34 39 06

Accommodation: VVV Leopoldsburg, Hechtelsesteenweg,
B-3970 Leopoldsburg, BELGIUM
Tel+Fax: +32 11 40 21 84

INTERNATIONAL FIXTURES LIST

This list includes all open events in the 1997 IOF Calendar with closing dates after 15th September. The entry closing date, where known, is shown at the end of the event name. Then follows the type of event: I - individual, C - classic, S - short distance, L - long distance, R - relay, R(N+D) - relay (night + day). A number shows the number of days, e.g. 2I/R means 2-day individual followed by relay. Line 2 gives the contact address and telephone and fax numbers. A * indicates that the event is designated an IOF Elite Event.

SEPT

29-4/10

Veteran World Cup, Camp Ripley, Minneapolis, USA 3I VWC 1997, P.O. Box 23044, Richfield, MN 55423, USA T & F +1 612 869 4043, e-mail VWC97@aol.com

OCT

4

* **Australian Championships C**
OFA, P.O. Box 740, Glebe NSW 2037, Australia
T & F +61 2 660 2067

4, 5

* **Suunto Games, Võru, Estonia (22/9) 2I**
Sixten Sild, Jüri 31, EE-2710 Võru, Estonia
T & F +372 78 21546

11, 12

Raid Azur, Côte d'Azur, France 2L
G Deli, Maison Départementale des Sports, La Rode, 83000 Toulon, France T & F +33 4 9408 1784

12

5th National Event, Dilsen, Belgium (15/9) I
C Addiers, Motstraat 51, 3570 Alken, Belgium
T +32 11 314538

18

* **Blodslitet, Fredrikstad, Norway L**
P Stenseth, Morenevn. 6 B, N-1609 Fredrikstad, Norway
T +47 6931 6031, F +47 6931 8205

18, 19

8th National Event, Chur, Switzerland (18/9) 2I
C Wetzstein, Signinastr. 17, CH-7000 Chur, Switzerland
T +41 81 284 2362

19

* **National Event, Forest of Dean, SW England (28/9)**
C I Stirrups, Cloud Harrow, Madam Wood, Painswick, Glos., U.K. GL6 6SZ T +44 1452 812923

25, 26

Høst-Open, Bornholm, Denmark (30/9) 2I
O Hansen, Bedegadevej 24, DK-3782 Klemensker, Bornholm, Denmark T +45 5696 6038

25, 26

Smålandskavlen, Ljungby, Sweden (1/10) R(N+D)
F Carlsson, T +46 372 13330, F +46 372 81635,
<http://www.smsk.slu.se/personliga/s5carsve/fkfinn.htm>

NOV

1, 2

Oszi Spartacus Kupa, Budapest, Hungary (1/10) 2I
Tabáni Spartacus SE, Attila u. 2, H-1013 Budapest, Hungary

1-3

Nagano 3-days, Sugadaira, Japan (20/9) 2I/R
R Toshimitsu, Greentown 2-403, Misumi 1-4, Higashi-Murayama, 189, Japan F +81 423 94 91 55
e-mail sdm88249@pcvan.or.jp

9

Jættemilen, Copenhagen, Denmark (20/10) L
J Nørgaard, Baunevej 126, DK-2630 Tåstrup, Denmark
T +45 4252 3995

9

National Event, Lake District, England (3/10) I
A Tarr, 23 Clifton Road, Runcorn, Cheshire, U.K. WA7 4SX T +44 1928 575599

DEC

25-27

Otzma Cup 97, Galilee, Israel 3I
Israel Sport Orienteering Association, P.O.B. 1392, Ramat Hasharon 47100, Israel F +972 9 748 1758

26-30

10th Sylvester 5-days, Leopoldsburg, Belgium (15/11)
SI L Vanhees, Heidestraat 100, 3581 Beringen, Belgium
T +32 11 343906

Ski Orienteering

'First Snow' International Event, Syktyvkar, Russia 3I

Between 2 & 9/12/97. Enquiries: Vladimir Golov, Kutuzova st. 15-9, Syktyvkar, 167011 Russia T +821 2 445099, F +821 2 424196



5 Days of Valle di Non

TRENTINO - ITALY

5 DAYS INTERNATIONAL ORIENTEERING COMPETITION

7-11 JULY 1998

C.O.N.I.  F.I.D.A.L.
F.I.S.O.

AZIENDA DI PROMOZIONE TURISTICA


Valle di Non

INFORMATIONS

ORIENTEERING CLUB PREDAIA - Via delle Albere, 50 - I - 38010 TAIÒ (TN) Italy

Tel./Fax (int) + (0) 463 467 194 - E-mail: predaia@mbox.vol.it - Internet: www.datas.it/orienteering_predaia

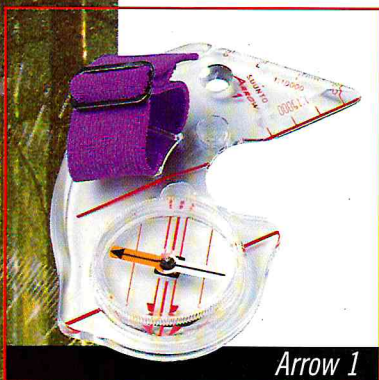


NEW! The top of thumb compasses with an extra-large magnifying lens. Special model for left-handers.



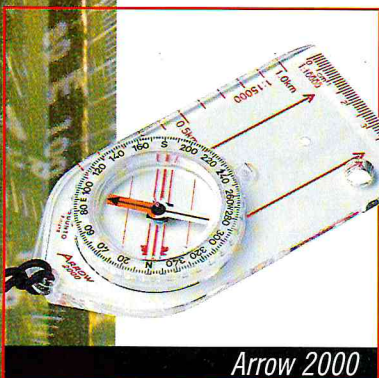
Arrow 2/R and 2/L

Another top-class thumb compass in the Arrow family. Easy to use, clearly visible scales, rotating capsule.



Arrow 1

A top-of-the-line compass that fits the hand. Ergonomically designed with rounded edges, hole for control marking, etc.



Arrow 2000

Similar to the Arrow 2000, with a TV-shaped magnifying lens.



Arrow 2200

The world's only double-bearing wrist compass. Can also be used for taking exact bearings as with a baseplate compass.



Arrow M-9

SUUNTO
ARROW

Five ways to find a trail

A new member just arrived in the **Suunto Arrow** family of compasses: a thumb compass with a special model also for left-handers. Now there are five models in the Arrow family, each equipped with the unique double-bearing construction developed by Suunto.

That is why every Arrow compass gives you the right direction quickly and steadily. While the others are still spinning around.

SUUNTO