

HUFF



November 1997

Volume 1, Issue 3

The OzHPV Challenge Special

Letter from the Editor

by Karl Nissen

If you were able to attend the HPV Challenge in early November you may have heard me say that I expected to have the newsletter out in late November. Due to a number of delays I was not able to make my own deadline, but hopefully the next newsletter in January will be back on schedule, that is you should receive it sometime towards the end of January.

As I write this it is now about 10 days before Christmas, and I am trying to work out where the year has gone. In the first newsletter six months ago I said that there was increasing interest in the recumbent by the general public, and the OzHPV Challenge of a month ago confirms this. We had a record number of entries with a total of 49 competitors in at least one of the events, and we think that we also had a record number of spectators as well.

With this in mind we have included a generic HPV challenge questionnaire to get your input for the next year's event. It isn't important if you were not able to attend the event this year, or due to distance considerations you feel that you may not be able to attend the event next year. We want your ideas in order to make this event even better.

We also need to hold general elections for the positions of OzHPV president, secretary and treasurer soon.

Elections for these positions will happen through a postal ballot in January (as part of the January issue of HUFF) so if you have any interest in any of these positions could you please contact Paul Segal before the end of January. Contact details can be found at the bottom of this page.

For those of you with access to the World Wide Web check out the OzHPV home page for

copies of the photos taken for this issue of HUFF. Photos from other competitors and spectators (thanks, Giles) will also be added to the Web site as time permits.

On behalf of the OzHPV committee let me wish you a Merry Christmas and a great New Year.

Best regards,

Not a particularly festive PS...As mentioned in Edition 2 of HUFF, if you are not a member of OzHPV this will be the last edition you will receive....

The HPV Challenge

by Karl Nissen

The morning of the OzHPV challenge dawned fine with the promise of a hot day. As in previous years the Challenge was to be staged at the Sutton Road Driver Training Course located on the border of the ACT and New South Wales.

In past years the event had been successfully run by Pedal Power but this year was the inaugural year of the event run by OzHPV. A few changes had been made to the format, the most significant being that the total

number of events had been reduced to make the event more of a social event.

A total of 49 competitors from all over Australia took part in at least one of the twelve events on offer over the two days of competitive events.

The competitors arrived with a wide range of machinery, including a range of recumbent bikes and trikes, a couple of

newsletter of OzHPV Incorporated.

Head Up Feet First is the incorporated. OzHPV can be contacted via Paul Segal at pauls@atrax.net.au, or via the editor at karl@dart.anu.edu.au. The ever developing OzHPV web page can be found at <http://sunsite.anu.edu.au/community/ozhvp>. You can contact OzHPV by mail at OzHPV Inc, 25 Wilkins Street, Mawson, ACT 2607 or phone (02) 6286-4092 (evenings).

Programme of events

	Saturday		Sunday
9:00	Registration	9:00	Registration
10:00	Hill Climb	10:00	Twin drag
10:30	Road Race	11:00	Slalom
12:00	Lunch/Come and Try	12:00	200 m Sprint
14:00	Time Trial	12:30	Lunch/Come and Try
15:00	Enduro	14:30	Junior Criterium
15:45	Come and try	15:30	Open Criterium
19:00	Barbecue	16:30	Award Presentation

Competitors in the 1997 OzHPV Challenge

BikeNo	FullName	HpvName	HpvType	Suburb	State	VehicleNotes	ConstructorDesigner
1	Ben Crutchett		BMX	Kambah	ACT	bmx and greenspeed	
2	Keith Phillipson	greenspeed	Trike	Bathurst	NSW	Greenspeed	
3	Michael Wood	Jaws	Trike	Concord	NSW		
4	Chris Hatherly		MWB Recumbent	Kelso	NSW		Kotzur
5	Stephen Howe		Trike	Camden	NSW	Homemade	Stephen Howe
6	Leigh Gribble	Compuframe	Trike	Wangaratta	Vic		
7	Graham Hyslop	Homebuilt	SWB Recumbent	Mudgeeraba	Qld		
8	Peter Heal	Lizard	SWB Recumbent	Duffy	ACT		Peter Heal
9	Andrew Puckett	Rola	Trike	Forestville	NSW	home built	
10	Giles Puckett	Lungfish	Trike	Hunters Hill	NSW	"trike 2F1R, faired, homebuilt"	
11	Marshall Wilkinson	Ian H's Kotzur	SWB Recumbent	Lane Cove	NSW		Kotzur
12	Peter Holloway	Tailwind	SWB Recumbent	Vermont	Vic	full suspension	Freedom HPV's
13	Ken Rubeli	Clockwork Banana	SWB Recumbent	via Dungog	NSW	tourer	Kotzur
14	Michael Carden	Yardstick	Road Bike	Waramanga	ACT		
15	Stephen Nurse	Hammerhead Special	SWB Recumbent	Clifton Hill	Vic	direct steer	
16	Paul Sims	Wipeout	Trike	Belgrave	Vic	Greenspeed trike	Sims
17	Mike Dennis	Midnight Special	Trike	Bundeena	NSW		
18	Damien Clarke	Low Fang	SWB Recumbent	Holder	ACT		
19	David McCook	My bike	SWB Recumbent	Jerrabomberra	NSW		
20	Scott Seford	Scooter	Trike	Croydon	Vic	Greenspeed racer	
21	Scott Seford	Bog Standard	Trike	Croyden	Vic	Greenspeed trike	
22	Roger Anderson	Legend	LWB Recumbent	Kambah	ACT		
23	Josh Anderson	Legend	LWB Recumbent	Kambah	ACT		
24	Gary Higgins	Green Limousine	LWB Recumbent	Manly	NSW		Peter Heal
25	Steve Hegarty	Giant	Road Bike	Manly	NSW		
26	Paul Segal	Rubber Shredder	SWB Recumbent	Mawson	ACT		
27	Karl Nissen	Exit	SWB Recumbent	Downer	ACT		Kotzur
28	Robert Braunsthal	Bluespeed	SWB Recumbent	Athelstone	SA	greenspeed Bike (unusual)	Ian Sims
29	Ian Knox	Orange Roughy	SWB Recumbent	Mulgrave	Vic		Ian Knox
30	Kaye Knox	Tangerine Dream	SWB Recumbent	Mulgrave	Vic		
31	Steve Seller	Blood Rush	Trike	Wodonga	Vic		Greenspeed
32	Rod Bryson			Patonga	NSW		
33	Stephen Spencer	Canondale	Road Bike	Hawker	ACT		
34	Vicky North			Leichardt	NSW		
35	Lloyd Charter	Go Easy	Trike	Lamington	NSW		
36	Ben Harvey		MTB				
37	Louise & Wayne Spencer		Tandem	West Ryde	NSW		
38	Guy & Sam Brown	The Limo	Tandem	Curtin	ACT		
39	David Maccormick	Algernon	MTB	Richmond	NSW		
40	Ben Curtis		BMX	Florey	ACT		
41	Colin Dedman	Greased Lightning	Road Bike			Electrically Assisted	
42	Ian Humphries	Golden Rough	SWB Recumbent	Newtown	NSW	Low racer	Ian Humphries
43	Katina Curtis						
44	Rory Pettit	greenspeed					
45	Kathryn Ibbotson						
46	Susan Dedman						
47							
48	John Dedman						
49	Stephen Anderson						

competitors on upright bikes and probably the largest number of low rider bikes seen at any of the HPV challenges. This year was interesting in that the number of machines manufactured outside of Australia was almost non-existent, with only Ian Sims of Greenspeed and custom frames built by Wayne Kotzur making up the production machine entries. At a rough estimate about half of the machines competing would have been home-built.

There was also an interesting turn out of spectators machines including the Canberra

Bike Museum with a Manx recumbent manufactured in the 1930's and a recumbent bike with a frame constructed out of plywood.

As with past years there were a number of familiar faces at this event, including Paul Sims and Scott Setford (the outright winner of the 1996 HPV Challenge), Peter Holloway with a couple of new machines (his competition machine was almost ready this year as well, having not quite made it to the paint shop before the Challenge) and Ken Rubeli from Dungog with Clockwork Banana.

During the planning stages of the HPV challenge the organisers have looked into other possible venues, but the Sutton Road driver training course is hard to beat as a venue for the HPV Challenge. It is located about 14 kilometres from the centre of Canberra, almost on the ACT/NSW border at Queanbeyan. The course provides an undulating 2.6 kilometre circuit, which includes an 800 metre straight and a tight, twisty hill section. In addition to the road circuit there is a manoeuvring ground and a 4WD off road course. On site camping is also available with showers and a kitchen round out the facilities on offer.

The organisers had decided this year that there would be no slow and easy start to the competition with the Hill Climb being the first event away. This year the event was started from the



Chris Curtis gives Andrew Puckett (9) on Rola some assistance in climbing Mt. Kotzur during the Enduro.



Paul Segal (26) leads off on the start of the time trial.

Lunch and top of the menu isrecumbents.



Various slalom styles with Ken Rubeli (13) left, Scott Setford (20) middle, and Michael Wood (3) on right.



main straight instead of the manoeuvring ground which gave riders about 100 metres of straight track to sort themselves out. In past years this event had started from the manoeuvring ground, and the competitors had to negotiate a couple of narrow bends before the hill climb proper. The hill climb this year was won by Ian Humphries on his Golden Rough low rider with Scott Setford second and Peter Heal third.

In order to keep the competitors heart rates up the next event was the road race, which would be a total of 26 kilometres or 10 laps of the undulating course. In past years this has been run in a clockwise direction, but this year the race was to go anti-clockwise. As one of the struggling tail enders I was to appreciate the single steep climb with a couple of lower grade climbs that seemed to make the course a little faster than last year.

It proved to be a challenging race with the sun now starting to heat up the track and the competitors alike, although the eventual winners (Ian Humphries, Scott Setford and Mike Dennis in the first, second and third places



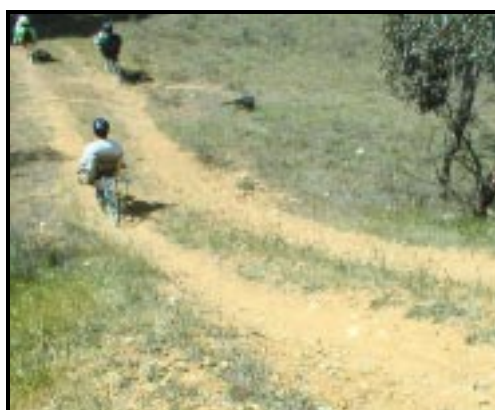
Both the Enduro and the Criterium used a Le Mans start with a 10 metre sprint to the bikes before mounting up and departing



Michael Carden (14) and David McCook (19) line up for the twin drag



Robert Braunsthal (28) (Greenspeed recumbent bike) and Graham Hyslop (7) (hombuilt recumbent bike) relax after the twin drag.



The Enduro and the drop off Mount Kotzur, which was much steeper than this photo indi-



Stephen Nurse (15) and Steve Seller (31) in the twin drag.



Ian Knox (29) at speed during the 200 metre sprint.



Competitors await the start of the time trial in one of the few patches of shade at the Sutton Road driver training facility.

respectively) were to record average times exceeding 35 kilometres per hour.

Lunch followed, with a number of the spectators and competitors taking the opportunity to sample the sandwiches, cakes and drinks provided by the Scouts. Others took the opportunity to try out some of the recumbent machinery of others. In past years lunch had been a fairly quick affair with the quick return to the competition, but the longer and more leisurely pace for lunch this year provided people with a better opportunity to discuss recumbents, swap ideas and socialise.

The first event after lunch was the time trial where individual competitors went up against the clock for one circuit of the road circuit. First in was Ian Humphries with an average speed of 40.52 kilometres per hour, with Scott Setford and Mike Dennis in second and third positions with average speeds of 39.66 and 38.84 kilometres per hour. Times were extremely close between the top three with an elapsed time difference between first and third of only 10 seconds.

After a small break the competitors lined up for the Enduro, which this year was to be run on the four wheel drive circuit. This had the advantage over last years course where at least there was a road of sorts to follow.

One of the features of the course was the conquest by the riders of Mount Kotzur, a small hummock with a drop off on the far side that was to cause a couple of riders to come off during the event, giving the St Johns people on site a couple of causalities to practice their skills on. Overall damage was limited to some bruising and scrapes.

The Enduro seemed to prove that if you want to win on off road courses then the mountain bike is supreme with both the first and second places going to David MacCormick and Ben Harvey on mountain bikes David McCook was third.

Overall Placings in the 1997 HPV Challenge



Start of the Junior Criterium for those under 14



Peter Holloway (12) at speed during the Open Criterium



Marshall Wilkinson (11) in his first HPV challenge performed well on Ian Humphries (42) recumbent commuter.



David McCook (19) looks for an opportunity to pass Josh Anderson(23) during the Open Criterium

BikeNo	FullName	HpvType	HpvName	TotalPoints	Rank	State
42	Ian Humphries	SWB Recumbent	Golden Rough	71	1	NSW
20	Scott Selford	Trike	Scooter	56	2	Vic
19	David McCook	SWB Recumbent	My bike	54	3	NSW
13	Ken Rubell	SWB Recumbent	Clockwork Banana	44	4	NSW
16	Paul Sims	Trike	Wipeout	40	5	Vic
9	Andrew Puckett	Trike	Rola	37	6	NSW
11	Marshall Wilkinson	SWB Recumbent	Ian H's Kotzur	37	6	NSW
17	Mike Dennis	Trike	Midnight Special	36	8	NSW
4	Chris Hatherly	MWB Recumbent		35	9	NSW
12	Peter Holloway	SWB Recumbent	Tailwind	34	10	Vic
14	Michael Carden	Road Bike	Yardstick	34	10	ACT
3	Michael Wood	Trike	Jaws	32	12	NSW
15	Stephen Nurse	SWB Recumbent	Hammerhead Special	32	12	Vic
26	Paul Segal	SWB Recumbent	Rubber Shredder	32	12	ACT
1	Ben Crutchett	BMX		31	15	ACT
28	Robert Braunsthal	SWB Recumbent	Bluespeed	28	16	SA
18	Damien Clarke	SWB Recumbent	Low Fang	25	17	ACT
2	Keith Philipson	Trike	greenspeed	24	18	NSW
7	Graham Hyslop	SWB Recumbent	Homebuilt	24	18	Old
29	Ian Knox	SWB Recumbent	Orange Roughy	24	18	Vic
22	Roger Anderson	LWB Recumbent	Legend	23	21	ACT
10	Giles Puckett	Trike	Lungfish	20	22	NSW
8	Peter Heal	SWB Recumbent	Lizard	18	23	ACT
6	Leigh Gribble	Trike	Compuframe	16	24	Vic
23	Josh Anderson	LWB Recumbent	Legend	16	24	ACT
31	Steve Sellar	Trike	Blood Rush	16	24	Vic
40	Ben Curtis	BMX		16	24	ACT
32	Rod Bryson			12	28	NSW
35	Lloyd Charter	Trike	Go Easy	12	28	NSW
39	David Maccormick	MTB	Algernon	10	30	NSW
49	Stephen Anderson			10	30	
36	Ben Harvey	MTB		9	32	
5	Stephen Howe	Trike		8	33	NSW
24	Gary Higgins	LWB Recumbent	Green Limousine	8	33	NSW
25	Steve Hegarty	Road Bike	Giant	8	33	NSW
27	Karl Nissen	SWB Recumbent	Exit	8	33	ACT
30	Kaye Knox	SWB Recumbent	Tangerine Dream	8	33	Vic
41	Colin Dedman	Road Bike	Greased Lightning	8	33	
43	Katina Curtis			8	33	
44	Rory Pettit		greenspeed	6	40	
47				5	41	
21	Scott Selford	Trike	Bog Standard	4	42	Vic
33	Stephen Spencer	Road Bike	Canondale	4	42	ACT
34	Vicky North			4	42	NSW
37	Louise & Wayne Spencer	Tandem		4	42	NSW
38	Guy & Sam Brown	Tandem	The Limo	4	42	ACT
45	Kathryn Ibbotson			4	42	
46	Susan Dedman			4	42	
48	John Dedman			4	42	

The Saturday competition concluded with a barbecue provided by the Scouts.

Sunday dawned fine with the promise of another long and hot day. The first event on the programme for the day was the twin drag, with competitors pairing off and racing a straight course of 200 metres from a standing start. The winner from each of the drags would go onto the next round.

At the end of the competition Scott Setford had just pipped Ian Humphries for first position with an average speed over the 200 metre distance of 38.44 kilometres per

hour. Third in the event was the ever consistent David McCook.

After a brief break to rearrange the tracks the competitors lined up for the slalom. This event consisted of a speed run from a standing start through a set of witches hats for a total distance of 100 metres. The trikes were to give some impressive cornering demonstrations as the competitors threaded their way through the cones. with special mention given to Michael Wood and his impressive two wheel cornering on his trike Jaws.

At the conclusion of the slalom the standings for the



Mike Dennis (17) and Bill Shelly discuss the pros and cons of trike construction in carbon fibre



Damien Clarke (18) with his new Kotzur low racer Low Fang



One of two new bikes built by Peter Holloway (12) of Cycle Science, this was a fully suspended design



Giles Puckett (10) had put a busy year in on building a fairing for his recumbent trike. Information on the construction of the fairing can be found at <http://www.recumbents.com/giles/fairing.htm>



Chris Haterly (4) on another Kotzur creation that he toured around Australia before attending the HPV Challenge. After the Challenge Chris headed off to Tasmania to continue touring.



The second of Peter Holloway's designs, this one a Bike-E clone, with 20 inch front and rear wheels and rear elastomer suspension



Ken Rubeli (13) on the Kotzur built Clockwork Banana was back this year. Keep an eye open for the Dungog ride next September organised in part by Ken.

Some of the competitors at the 1997 HPV Challenge showing the diversity of recumbents at this years HPV Challenge



Ian Humphries (42) and the machine that placed first in this years HPV Challenge.



Colin Dedman (41) and his electric assist vehicle aptly named Greased Lightning. In past years this vehicle blitzed everyone else in the road race



Michael Wood (3) the two wheel slalom expert and Jaws



Keith Phillipson (2) with his Greenspeed trike and custom wheel covers, which will feature in the January issue of HUFF.



Another of the HPV Challenge regulars, Lloyd Charter (35) on So Easy



Steve Nurse (15) with his SWB recumbent bike Hammerhead Special



Peter Heal (8) had spent a busy year making modifications to his recumbent bike. New this year was above seat steering, rear wheel disk and the front and rear fairings



Rodney Bryson (32) on his home built low rider

event were David McCook first with a time of 11.32 seconds , Ian Humphries second with 12.67 seconds and Paul Sims third with a time of 12.98 seconds.

The slalom was followed by the 200 metre sprint, which would allow the competitors an unlimited run up. Times in this event tend to be fairly fast as part of the run up includes a 15 metre drop, so by the time the competitors pass through the starting gate most are into the high gears. In past years speeds of over 65 kilometres per hour have been reached. This year the speeds were a little

slower, but given that the record speed was achieved by a fully faired recumbent, the speeds returned by the competitors this year are still impressive. First was Ian Humphries with a speed of 61.53 kilometres per hour, second was Scott Setford with 60.75 kilometres per hour, and Paul Segal was third with 56.25 kilometres per hour.

After another leisurely lunch that gave the competitors time to relax the Junior Criterium was run with a total of nine entrants. First in this event was Stephen Anderson with Andrew Puckett second and Katina Curtis third. The junior Criterium was followed by the Open Criterium which was run over three heats and a final, with approximately eight competitors per heat. The Open Criterium was to provide some spectacular and close racing, with a close battle between the top four places going to David McCook, Ian Humphries, Josh Anderson and Marshall Wilkinson. Special mention should go to Josh Anderson on a long wheel based cruiser style of bike built by Legend Cycles who was able to reach third place on a bike that we honestly thought would not be that fast. Congratulations!



And the winner is....Ian Humphries receives the first place trophy from Wayne Kotzur

The Open Criterium was the final event on the programme so it was now time to retire to the shade and total up the points. The presentation of awards and prizes was to put Ian Humphries first, Scott Setford second and David McCook third.

So that was the HPV Challenge over for another year and it will be back next year. I'm personally looking forward to it, if the level of competition this year was any indication of what is to come, next year

should be an even more interesting year. This year saw an increase in the number of low riders and it will be interesting to see if this trend will continue next year. We had one fully faired trike and a couple of partially faired bikes and trikes, and next year we may see more work on fairings, as this seems to be the next subject for experimentation in the search for higher speeds and better times.



The Canberra Bike Museum has a number of recumbents from their extensive collection of bikes, including this Manx recumbent manufactured in the 1930's.



Canberra Cycles, one of the principal sponsors of the Challenge were on hand to provide maintenance as needed. Paul Segal's bike gets a last minute check before the start of the competition.



Bill Shelley of Billspeed with his carbon fibre trike.



A Greenspeed hand propelled trike on show at the Greenspeed stand.



Ian Sims of Greenspeed was present with a number of his products, one being modelled by Paul Sims (16).

The trade and exhibition area at the 1997 HPV Challenge.



Chris Curtis and his solar assist trike Sun-strike. The top half of the fairing with the solar cells can be seen behind Chris.

In closing we would like to get your feedback on the HPV Challenge this year and what OzHPV Inc needs to do to make the event better. You will find a survey form in this newsletter which will give a summary of areas that we would like your input, however this should be used as a guide only. We want your input in any shape or form.

Finally our thanks for all those who were involved in the HPV Challenge as either a competitor, spectator or official, and we'll see you all again at the 1998 OzHPV Challenge next year.

The ACT HPV Challenge : Low racers arrive in numbers!

by Ian Humphries

The very speedy Scott Setford and his Greenspeed Special low race trike has finally inspired a multitude of new low race oriented HPVs! Perhaps it was the Greenspeed race trike's decisive wins in last year's ACT HPV Challenge but there were four new low racer bikes and a second low racer trike, as well as Ken Rubeli's low profile SWB, for a total of seven low down and laid back speed machines at the 1997 event.

Special Thanks to.....

Before the 1997 HPV Challenge vanishes in the dust of another hot summer there are a few people who should rate a special mention in the organisation and running of the event.

Wayne Kotzur, Don Thomas, Leanne MacKay and Duncan Cleland for being there to officiate when they would rather be riding.

Damian Clarke for his work on the timing and scoring

systems, and more recent work on preparation of the images for this issue of HUFF.

St. Johns for being there as always, our thanks for their help in the Enduro accident.

The Scouts for taking the cooking duties off our hands (very much appreciated).

Canberra Cycles and Greenspeed for their technical shop-fronts and assistance throughout the weekend.

The Canberra Bike Museum for their always interesting collection of bikes and trikes

And to the spectators and competitors that took the time to attend and make the 1997 Challenge another memorable event.



One of the St Johns volunteers tries out one of the Canberra Bike Museum's highwheel bikes under the careful eye of Rod Driver.



Rory Pettit (44) tries Paul Segal's new Kotzur recumbent bike during one of the Come and Try sessions.



Wayne Kotzur trials the new range of recumbent furniture for HPV challenge officials from Dunlop.

And just to show that the event is just not competition here are a few photographs of the spectators at the 1997 HPV Challenge.



An unidentified LWB recumbent bike constructed out of plywood with rear suspension. Anyone have any more details on this bike or the owner?



Luke and Malcolm Parkes with an Ally-cat Shadow trailerbike.



Phil Bissell rode up from Melbourne on his Expedition Greenspeed trike.

This is definitely a good trend and we may win some of the more open-minded "go fast wannabes" over from the lycra set. For instance there were three upright road racers competing at the Challenge this year with the intention of checking out whether 'bents were actually faster or whether our aero and speed advantage was all hype. After the 25km road race, which is actually a bit on the hilly side, one particularly fit racer who was

pushed back into 5th place by the 'bents was heard to comment that being beaten by someone 20 years older who only did a quarter of the riding that he did, seemed to show the 'bents advantage pretty clearly!

The low racing 'bents:

- Scott Setford - Greenspeed Special low race trike

"little yellow terror"

- Ken Rubeli - Kotzur Low Profile SWB "clockwork/electric banana"
- Rodney Bryson - Homebuilt "Flux inspired" low racer SWB
- Damien Clarke - Kotzur Low Racer SWB "Low Fang"
- Stephen Howe - Homebuilt "Dalli inspired" low racer SWB
- Mike Dennis - Homebuilt carbon fibre low race trike
- Ian Humphries - Homebuilt "M5 inspired" low racer SWB "flying furniture"

I think this years road race was probably the closest ever, and I look forward to more race HPVs appearing next year. We may even have a bunch sprint! Maybe we can also emulate the European and US HPV meets sometime soon and get a dozen or so fully faired speedsters racing, although the many hills makes me and others question a faired HPVs advantage on the Challenge course.....I'd love to be proved wrong by a super lightweight faired HPV though!

This year strangely I noticed for the first time that racing other recumbents is actually hard work. Racing against upright bikes allows a good advantage - you can virtually rest on the flats and downhill, so that you really only have to pedal hard on uphill. My touring and commuting recumbent for instance seems as fast or faster than the average road bike and has an advantage over most terrain and my low racer is a quite a bit faster again. Still ... I found no such advantages over other sleek racing recumbents! There wasn't any "relax and enjoy the scenery time" like I'm used too! Maybe I need a fairing ?

Anyway if you feel like doing a bit of low altitude flying and building a low racer for next year I'd be pleased to pass on the complete details of the tubing, geometry, measurements and construction methods I used - if there is any interest it will probably appear in HUFF. For now though, here's a brief low down: 622mm ("700c") rear wheel, 451 mm ("20x11/8 inch") front wheel. The steering geometry is based around a head angle of 69 degrees, with approx 20mm fork rake giving about 70mm trail. I used the same head angle and trail (trail being the most important) that works so well on my commuter 'bent, and it seems to work on the low racer too. I can ride "no hands" on both bikes, though not for as long on the low boy! The wheelbase is a long and stable 1200mm, with the rear wheel way out behind the centre of gravity the bike has a great deal of high speed stability and excellent tracking through rough stuff, (analogous action to the quills on an arrow?). Moving the rear wheel back also allows for more weight on the front wheel for good balance and predictable handling. The seat angle is 20 degrees from horizontal, with the seat base approximately 300mm above the ground.

One interesting discovery that I think is also worth sharing is that this bike has shown that a solid seat can actually be quite cool. I'd previously thought solid seats were really hot and sticky having personally experi-

enced the wet back syndrome on a few foam covered hard fibreglass seats. For the seat on my low racer I chose sheet aluminium, mounted directly onto the frame, mainly because it was easy, cheap (\$10) and light, and padded it with some old 5mm foam and covered it with a piece of offcut lycra. I was amazed at how much cooler it was than other solid seats ! I suspect that because the lycra allowed a bit of movement and hence a bit of air flow I didn't get the sweat build up I have experienced on other solid seats. Perhaps it was just the speed but it was almost as cool as a mesh seat and very comfy!

I hope to see you next year at the Challenge or at the *VELODROME* racing I'll be organising in Sydney in early 1998! Contact me if you are interested at IanH@nch.edu.au or telephone (02) 9845 3988 (w) / (02) 9550 2805 (h)

Rafflebent Winner !!!

The winner of the Rafflebent, a SWB recumbent bike donated by Wayne Kotzur with STX componentry supplied by Canberra Cycles was:

Julie Broidy of Epping, NSW

Congratulations !!!!

Upcoming Events

Please contact OzHPV if you have any additional events for 1998

Adelaide Recumbent Ride every first Sunday of the month, 10-30 km. Contact Ian Knox at 08-8266-5215 (h), 08-8393-3475 (w).

The Sydney Recumbent Riders social gatherings and demo days are usually held on the 3rd Saturday of the even months (thats of the normal-non-HPV-calendar!).

Qld HPV Enthusiasts are preparing a calendar and will have a newsletter out early 1998, Please contact Ray Hembrow, 07 3843 2729 after 6.00 pm for further de-

20-December-1997 OzHPV/Sydney Recumbent Riders Centennial Park ride. 9am-11am. Inside Woollahra gates cnr Oxford St and York Rd. Contact Ian Humphries (02) 9550 2805 (home) (02) 9845 3988 (w).

18-January-1997 OzHPV/Sydney Recumbent Riders social ride for recumbent owners and people interested in HPVs. Grade: M Distance: approx 50km or so. Contact: Ian Humphries (02) 9550 2805 (home) (02) 9845 3988 (w)

21-February-1998 OzHPV/Sydney Recumbent Riders social meeting and demo rides. All welcome. 9am, Centennial Park, Sydney. Grade: E-M Contact: Ian Humphries (02) 9550 2805 (home) (02) 9845 3988 (w).

March-1998 Velodrome racing in Sydney. Contact Ian Humphries (02) 9550 2805 (home) (02) 9845 3988 (w) if interested.