

**INDEX TO HUMAN POWER, THE TECHNICAL JOURNAL OF THE IHPVA  
Issues 1 – 55**

*Compiled by David Gordon Wilson, with editing from Richard Ballantine, April 2004  
TS 6May04*

---

Abbott prize	01-v1n1-1977	p. 2
reflections	03-summer 79-1979	p. 1
Abbott, Allan V.		
Flying Fish	11-v3n2-1984	p. 1
HPV	02-winter 78/79-1978	p. 5
letter	07-fall 81-1981	p. 2
prone recumbents	23-v7n2-1988	p. 1, 11-13
acceleration profiles, racing	38-v11n3-1994	p. 15
Adamson, Doug	10-v3n1-1984	p. 10, 15
aero drag, bikes, DF & 'bent	13-v3n4-1985	p. 3
aero thrust from cross wind, Leier	33-v10n2-1992	p. 17-18
Aerocoupe	10-v3n1-1984	p. 13
aerodynamics		
components of drag,	45-v13n2-1998	p. 15-17
HPVs	10-v3n1-1984	p. 18, 19
passing-vehicle effects	09-v2n2-1983	p. 11
recumbents	50-2000	p. 18-19
testing, low-cost	44-v13n1-1997	p. 11-13
Aeroshell answers	05-spring 80-1980	p. 7, 8
chronology	01-v1n1-1977	p. 6
Agler, Dave, HPV design	15-v5n1-1985	p. 1, 3-4
AHPVs, <i>see assisted HPVs</i>		
aircraft, HP <i>see HP aircraft</i>		
airfoil profile E 169, Flint	31-v9n3-1991	p. 23
Alaska greetings, Smiley Shields	49-1999	p. 25-26
Allen, Bryan L. (HP blimps)	12-v3n3-1985	p. 4-5
Allen, John S.		
drive-train effy.	51-2001	p. 15-16
energy storage	31-v9n3-1991	p. 10-13
HP in space	46-v13n3-1998	p. 13-15
Rotator recumbent	37-v11n2-1994	p. 22-23
spoke tension-tests	53-2002	p. 3-6
aluminum		
fatigue data, (and composites)	30-v9n2-1991	p. 4
recumbents, building	36-v11n1-1994	p. 10-13
Amphiped bike-boat combo	17-v5n3-1986	p. 4
Ancona, Ted, rowing HPV	02-winter 78/79-1978	p. 6
Andrews, Nick Abercrombie, folder	37-v11n2-1994	p. 18-21
angular momentum & sility	21-v6n3-1987	p. 4-5, 13-16
Antonson, Ingrid E., exercise	21-v6n3-1987	p. 7, 17-18
arm power added to recumbents	53-2002	p. 7-10
arm-and-leg-powered tricycle	53-2002	p. 20
cranking systems	21-v6n3-1987	p. 8-9, 18
arm-powered HPVs	10-v3n1-1984	p. 8, 9
vehicles	02-winter 78/79-1978	p. 2, 3
Armstrong, Allen, tricycle design	40-v12n1-1995	p. 5-8
Ashley, Steven, Cheetah record	34-v10n3-1993	p. 12-14
Aspro Clear Speed Challenge, 2 <sup>nd</sup> ,	1981:08-v2n1 – 1982	p. 6, 7, 10, 12
assisted HPVs		
comment, Izzy Urieli	39-v11n4-1994	p. 13-14
human-electric hybrid, Saari	42-v12n3-1996	p. 7-12

letters	40-v12n1-1995	p. 17-19
opportunities, Ernst	37-v11n2-1994	p. 14-16
Raine & Maxey	39-v11n4-1994	p. 4-10
response, Peter Ernst	39-v11n4-1994	p. 12
review of principles	39-v11n4-1994	p. 11-12
trailer, Koenekamp	47-(no. 46)-1998	p. 3-4
Velocity, Theo Schmidt	41-v12n2-1995	p. 21-22
auxiliary power in sailing race	11-v3n2-1984	p. 13-14
Avatar 2000, Bluebell	09-v2n2-1983	p. 6, 7, 16
backward pedaling		
backward vs. forward pedaling	21-v6n3-1987	p. 1, 10-12
comments	22-v7n1-1988	p. 8-9
balancing on HPBs, Stewart	27-v8n1(2)-1990	p. 24
Ball, Steve, Dragonfly III HPB	28-v8n4-1990	p. 5-6
Ballantine, Richard, HPV politics	54-2003	p. 3
Barter, Brian J. (materials)	15-v5n1-1985	p. 4-5
Batterel, Lucien, French pioneer	43-v12n4-1997	p. 18-19
Baxter, Arthur, HPVs in the thirties	24-v7n3-1988	p. 23-24
Beams, W. R. E.		
octogen. cyclist, I	40-v12n1-1995	p. 16
octogenarian cyclist, II	41-v12n2-1995	p. 12-15
Bean recumbent bicycle design	25-v7n4-1989	p. 11-15
Belcher, Olan, FWD, Eliasohn	30-v9n2-1991	p. 17-18
Bencivenga, Dominic, aero tests	44-v13n1-1997	p. 11-13
bending-strength test, airplane wing	41-v12n2-1995	p. 5-6
Benedict, Norm	10-v3n1-1984	p. 7, 8
Benetti-Longhini, Leo R. et al.		
propeller-blade manufacture	44-v13n1-1997	p. 6-9
Torpedo II submarine design	35-v10n4-1993	p. 3-7
Berger, Warren, off-trail stability	32-v10n1-1992	p. 16-18
Besterfield, Glen H. & Paugh, sub	35-v10n4-1993	p. 19-23
Bhatnager, Ashok, composites	13-v3n4-1985	p. 4
bibliography on bicycle literature	17-v5n3-1986	p. 12
bicycle fairings		
aerodynamic	20-v6n2-1987	p. 6-7
inertia, Allen	31-v9n3-1991	p. 10-13
bicycles and taxes, Veffler	44-v13n1-1997	p. 22
Bike Tech closes	23-v7n2-1988	p. 2
biomechanical models		
HP force & power	55-2004	p. 3-6
performance	54-2003	p. 14-16
Bionic Bat HPA	10-v3n1-1984	p. 3-6
Birdman rally, Japan, Higgins	41-v12n2-1995	p. 3-6
Bishop, Shields		
bendy shafts	34-v10n3-1993	p. 11-12
HPB experience	27-v8n1(2)-1990	p. 20-21
HPB hull shapes	29-v9n1-1991	p. 5
Bledow, Mike, FWD recumbent	30-v9n2-1991	p. 12-13
blimp, HP		
early	18-v5n4-1986	p. 13
early drawing	13-v3n4-1985	p. 20
HP flight	12-v3n3-1985	p. 4-5
Bluebell HPV, 51.919 mph	09-v2n2-1983	p. 1, 6, 7, 16
boats, <i>see HP boats</i>		
body configuration		
effect on performance, Reiser	46-v13n3-1998	p. 10-11
effect, performance, Too, Drela	47-(no. 46)-1998	p. 14-21

bombs not cars (editorial, Wilson)	39-v11n4-1994	p. 23
bonding aluminum successfully	04-summer/fall 79-1979	p. 2, 3
Bowden, Frank, Raleigh manager	55-2004	p. 17-18
brachistochrones	19-v6n1-1987	p. 2
brakes		
cantilever, failures, Wilson	53-2002	p. 12-13
Positech brake	53-2002	p. 15-17
Brandt, Cory, & Ackerman		
design of Triton & Deep Purple	33-v10n2-1992	p. 11-13
review of submarine race	31-v9n3-1991	p. 34-37
Brandt, Jobst, models and reality	45-v13n2-1998	p. 17-18
brick-making machine		
design of machine, Modak	45-v13n2-1998	p. 3-8
flywheel	54-2003	p. 2-23
British speed championships	06-winter 80/81-1980	p. 6
record attempt	07-fall 81-1981	p. 10-12
Brooks, Alec		
Flying Fish hydrofoil	11-v3n2-1984	p. 1, 7, 8
foil-borne HPBs	19-v6n1-1987	p. 1, 8-14
HP floats, notes	09-v2n2-1983	p. 13
HPVs	02-winter 78/79-1978	p. 6
Brown, Charles & Jon Stinson	33-v10n2-1992	p. 14-15
Brown, Charles, rolling resistance	33-v10n2-1992	p. 15-16
tandem recumbent	48-1999	p. 19
Brummer, Tim, Lightning X2	10-v3n1-1984	p. 19, 21, 22
Bryan, Harry, fins that copy nature	36-v11n1-1994	p. 6-9
Burrows, Mike		
cantilever hubs	33-v10n2-1992	p. 7-10
Lotus	33-v10n2-1992	p. 3-4
on starting HPVs	15-v5n1-1985	p. 6
Bussolari, Steven R.		
human factors, long flights	18-v5n4-1986	p. 8-12
physiological limits, human power	25-v7n4-1989	p. 1, 8-10
Buttemer, Paul		
altitude rules	44-v13n1-1997	p. 23
climbing ability	46-v13n3-1998	p. 17-18
IHPVA wind rules	47-(no. 46)-1998	p. 21-22
cadence, control of optimum	55-2004	p. 8
Café Racer, unusual fairing	20-v6n2-1987	p. 7-9
California orientation of IHPVA	08-v2n1 – 1982	p. 4
Cameron, Angus		
drag measurements	41-v12n2-1995	p. 7-11
drive-train effy.	47-(no. 46)-1998	p. 5-7
canal cruising		
canal cruising, HPB, Thiel	24-v7n3-1988	p. 15
pedal power on French canals	29-v9n1-1991	p. 4
canopies, free-blown	09-v2n2-1983	p. 12
cantilever wheel hubs, Burrows	33-v10n2-1992	p. 7-10
carbon fibre advocacy, Van Horn	36-v11n1-1994	p. 15-16
Carmichael, Bruce	09-v2n2-1983	p. 16
Carson Speed Challenge	09-v2n2-1983	p. 9
Cary et al., HPH	40-v12n1-1995	p. 9-15
caster, definition of, Steve Delaire	29-v9n1-1991	p. 3
catamaran HPB, Seacycle, Foley	28-v8n4-1990	p. 19-20
Cha-Cha FWD recumbent	30-v9n2-1991	p. 16-17
chain-drive efficiencies		
Spicer	50-2000	p. 3-9
Walton	51-2001	p. 14-15

chainless recumbent drive	49-1999	p. 11-14
Chan, Hei Wei (Don), frames	24-v7n3-1988	p. 6-8
Cheetah		
team breaks 200-m record	33-v10n2-1992	p. 3-4
world record sprint	34-v10n3-1993	p. 12-14
Circle Mountain pedal boat drive	28-v8n4-1990	p. 8
Clarke, Arthur C., wings	21-v6n3-1987	p. 19-20
climbing, low bottom bracket	45-v13n2-1998	p. 22
response by Kaplan	46-v13n3-1998	p. 16-18
co-axial HPH rotors, Patterson	55-2004	p. 19-20
college course in HPVs	03-summer 79-1979	p. 7
commuting HPV, design criteria	22-v7n1-1988	p. 1, 12-14
comparison of bikes over 12 miles	43-v12n4-1997	p. 6
comparisons of forms of assistance	37-v11n2-1994	p. 15-16
composite construction	07-fall 81-1981	p. 4, 5, 8, 13, 16
advanced materials	08-v2n1 – 1982	p. 8
builders' workshop	15-v5n1-1985	p. 7
fatigue data	30-v9n2-1991	p. 4
for HPVs	13-v3n4-1985	p. 4
graphite-epoxy, submarine hull	35-v10n4-1993	p. 19-23
construction plans, LWB, Stiffel	26-v8n2(1)-1990	p. 4-5, 14-16
control of optimum cadence	55-2004	p. 8
controls on Musculairs	16-v5n2-1986	p. 8
Cornelius, Craig J., rear steering	26-v8n2(1)-1990	p. 6-7, 17-20
Cote, shaft drive on Daedalus	40-v12n1-1995	p. 21
Counterpoint	10-v3n1-1984	p. 13
covering spoked wheels	15-v5n1-1985	p. 14
crank-arm length		
arm power, for	32-v10n1-1992	p. 19-21
effects, Too	48-1999	p. 17-19
Farnsworth formula	19-v6n1-1987	p. 2
optimum, Too	51-2001	p. 3-6
Weaver	52-2001	p. 19-22
cross-wind aero gains, Tim Leier	33-v10n2-1992	p. 17-18
Crouch, Iain, optimal gear selection	55-2004	p. 7-10
cruiser, inland, pedal-powered	11-v3n2-1984	p. 4, 6
Cutting Edge specifications	38-v11n3-1994	p. 14
cyclecar "Pedeluxe", Whitehead	42-v12n3-1996	p. 15-16
cycle-history		
IHPVA history	01-v1n1-1977	p. 10, 19
proceedings, 8 <sup>th</sup>	46-v13n3-1998	p. 22-23
da Vinci HP helicopter, Patterson	55-2004	p. 19
Daedalus		
aircraft drag	24-v7n3-1988	p. 5, 8
beginnings	15-v5n1-1985	p. 10
shaft drive on Daedalus, Cote	40-v12n1-1995	p. 21
test aircraft flights	18-v5n4-1986	p. 1, 4
transmission	20-v6n2-1987	p. 2
triumphs!	22-v7n1-1988	p. 2, 18-20
Danta, Randy	01-v1n1-1977	p. 8-9
Datsun-Compton Grand Prix rsults.	07-fall 81-1981	p.14
Davidson, LCDR W. A. sub design	35-v10n4-1993	p. 17-19
Decavitator hydrofoil HPB, Drela	31-v9n3-1991	p. 3, 5-9
deciMach prize, Eliasohn	49-1999	p. 18-20
deflation, tire, effects on stability	51-2001	p. 16-18
Delaire, Stephen, welding instr.	13-v3n4-1985	p. 1
Delft waterbike regatta, 1988	24-v7n3-1988	p. 11-13
derailleur and hub-gear efficiency	52-2001	p. 3-11

DeRoos, Bradley, et al, sub design	35-v10n4-1993	p. 9-14
Derr, John, shimmy & damping design and construction	22-v7n1-1988	p. 6-8
HPVs	13-v3n4-1985	p. 5-9
HPVs, 2 vs. 3 wheels	15-v5n1-1985	p. 1, 3-4
developing countries, HP in	12-v3n3-1985	p. 18-20
dilemma in cycling	20-v6n2-1987	p. 16-18
direct-drive recumbent bicycles	49-1999	p. 11-14
dirt roads & recumbents, Roberts	16-v5n2-1986	p. 13
disabilities, for riders with	3-v12n4-1997	p. 9-12
dish ratio, wheels and hubs, Forbes	47-(no. 46)-1998	p. 9
dish, wheel, causes, hub data	50-2000	p. 12-14
Donahue, James		
faired bicycles	34-v10n3-1993	p. 10
fairing development	20-v6n2-1987	p. 6-7
traction on ice	18-v5n4-1986	p. 13
Doppler aluminum recumbent	36-v11n1-1994	p. 10-12
Dorycycle HP boat	11-v3n2-1984	p. 4, 6
drag		
aero, data for Tricanter, Raine	31-v9n3-1991	p. 29-30
catamaran in water, Foley	28-v8n4-1990	p. 20
coefficients, bicycles	54-2003	p. 8
Daedalus drag	24-v7n3-1988	p. 5, 8
definitions	54-2003	p. 5
due to internal flow	05-spring 80-1980	p. 1, 8
force measurements	41-v12n2-1995	p. 7-11
frontal and surface area	23-v7n2-1988	p. 13-15
I.R. measurements chain losses	50-2000	p. 7-8
interference drag on two bodies	47-(no. 46)-1998	p. 20-21
measurements on HPVs	36-v11n1-1994	p. 14-16
partial fairings, Koren	39-v11n4-1994	p. 20
passing-vehicle effects	09-v2n2-1983	p. 11
reduction, from partial fairings	10-v3n1-1984	p. 15-17
reduction measurements	46-v13n3-1998	p. 18
rolling-resistance tests	51-2001	p. 9-13
speed & drag of HPVs	09-v2n2-1983	p. 11
spray drag, hydrofoils	19-v6n1-1987	p. 9-10
tires, wind, weight ,slope	48-1999	p. 10-13
ventilation and drag	20-v6n2-1987	p. 5-6
Dragonfly		
Some construction details.	05-spring 80-1980	p. 2, 8
Photo, with Steve Ball	10-v3n1-1984	p. 11
Dream-Ship race champion, Cogito	36-v11n1-1994	p. 3-5
Drela, Mark		
ChicK-2000 review	52-2001	p. 17
Decavitator	31-v9n3-1991	p. 3, 5-9
Daedalus drag	24-v7n3-1988	p. 5, 8
fairing ventilation	38-v11n3-1994	p. 23
fewer spokes advantage	48-1999	p. 16-17
helicopter pilot	48-1999	p. 20
interference drag	47-(no. 46)-1998	p. 20-21
Monarch B	12-v3n3-1985	p. 21-24
optimum bodies	48-1999	p. 16
oxygen uptake	45-v13n2-1998	p. 17
drive-train efficiency		
comments	51-2001	p. 15-16
measuring	47-(no. 46)-1998	p. 5-7
Du Pont prizes		

HPB prize, Eliasohn	27-v8n1(2)-1990	p. 8-9
land prize won! (Easy Racer)	16-v5n2-1986	p. 6
Dusen, Ted van, on HPV shells	15-v5n1-1985	p. 9
Dutch HPV competitions	10-v3n1-1984	p. 10, 15
dynamics		
calibration of ergometer	37-v11n2-1994	p. 4-10
models and reality, Brandt	45-v13n2-1998	p. 17-18
rear-wheel steering	28-v8n4-1990	p. 10-11
Dynohub, geared, Forbes	55-2004	p. 18, 21
Eastern Europe, HPV history, Utkin	52-2001	p. 23
Easy Racer		
Du Pont prize won	16-v5n2-1986	p. 6
history	09-v2n2-1983	p. 7, 8
photo 1984	10-v3n1-1984	p. 12
Easy Rider pedaled kayak	17-v5n3-1986	p. 4
Edwards, Eric	09-v2n2-1983	p. 14
efficiency		
bicycle chain drives	51-2001	p. 14-15
I.R. measurements chain losses	50-2000	p. 7-8
measurements on HPVs	36-v11n1-1994	p. 14-16
power production	25-v7n4-1989	p. 8-10
transmissions, Kyle	52-2001	p. 3-11
eighth IHPSC	09-v2n2-1983	p. 1, 4, 5
electric vehicles		
letter	07-fall 81-1981	p. 2
lightweight vehicles	08-v2n1 – 1982	p. 2
range vs aerodynamics	42-v12n3-1996	p. 9
elegy for Sturmey-Archer, Forbes	55-2004	p. 16-18, 20-23
elevator and rudder optimization	19-v6n1-1987	p. 6
Eliasohn, Michael		
aluminum recumbents	36-v11n1-1994	p. 10-13
deciMach prize	49-1999	p. 18-20
Feet-On review	50-2000	p. 21-22
FWD	30-v9n2-1991	p. 11-19
HP lawn mowers	39-v11n4-1994	p. 21-22
Pedeluxe HPV	42-v12n3-1996	p. 15-16
winning prize	27-v8n1(2)-1990	p. 8-9
energy storage		
Allen, John	31-v9n3-1991	p. 10-13
comment, Sharp	37-v11n2-1994	p. 10, 13
HPVs, Sharp	34-v10n3-1993	p. 19-23
recommendations, Sharp	36-v11n1-1994	p. 17-18
energy-consumption modeling		
electric-assisted HPV, Raine	39-v11n4-1994	p. 4-10
Tricanter, Raine	31-v9n3-1991	p. 26-33
engineering standards, wire rope	25-v7n4-1989	p. 2-3
ergometer dynamic calibration	37-v11n2-1994	p. 4-10
“Escargot” HP canal barge	55-2004	p. 22-23
Ernst, Peter		
“bridled” AHPVs	37-v11n2-1994	p. 14-16
practical recumbent	20-v6n2-1987	p. 4-5
Tour de Sol	15-v5n1-1985	p. 1, 4-5
Etnier, Carl, review of rickshaws	48-1999	p. 22-24
Ewalt, Carol and John, prize donor	10-v3n1-1984	p. 14
exoskeleton Springwalker	52-2001	p. 12-13
Extra-energy exposition report	42-v12n3-1996	p. 13-14
faired production vehicles		
bicycles	34-v10n3-1993	p. 10

tricycles, Fuchs	51-2001	p. 20-22
fairings		
bicycle, comment	29-v9n1-1991	p. 17-18
bicycle, efficiency, Kehoe	28-v8n4-1990	p. 15-18
comments, Zach Kaplan	44-v13n1-1997	p. 21
front, development	22-v7n1-1988	p. 4-5
shapes and wind effects	49-1999	p. 21-24
ventilation and drag	20-v6n2-1987	p. 5-6
ventilation of, Drela	38-v11n3-1994	p. 23
Farnsworth formula , crank length	19-v6n1-1987	p. 2
fatigue data, aluminum, composites	30-v9n2-1991	p. 4
Fearing, Robert B., paddlewheels	29-v9n1-1991	p. 1, 9-16
Fellenz, Dietrich W., tip-over, skids	45-v13n2-1998	p. 8-10
fewer spokes, aero advantage	48-1999	p. 16-17
figure-eight drive, Patroni	18-v5n4-1986	p. 20
fin power thrust transmission	36-v11n1-1994	p. 6-9
Fisher & Fisher, off-road HPV	42-v12n3-1996	p. 3-6
flat-tire directional performance	29-v9n1-1991	p. 17
Flevo FWD bike, trike, Brinke	30-v9n2-1991	p. 15-16
flight (HP) symposium, AIAA	39-v11n4-1994	p. 18-19
Flint, Wally, wind + human power	31-v9n3-1991	p. 21-25
floats, HP, design notes	09-v2n2-1983	p. 13, 15
flow visualization, liquid crystal	31-v9n3-1991	p. 20
Flying Fish HP hydrofoil		
breaking 2000-m record	17-v5n3-1986	p. 1, 5
development, Brooks	11-v3n2-1984	p. 1, 7, 8
version II, Eliasohn	27-v8n1(2)-1990	p. 8
flywheel motor, HP, Modak, Bapat	54-2003	p. 21-23
foil propulsion for HPBs	17-v5n3-1986	p. 5-9
news report	16-v5n2-1986	p. 15
kayak & hpvs	18-v5n4-1986	p. 7
propulsion at sea, Jakobsen	17-v5n3-1986	p. 5-9
foil-borne HPBs		
Foiled Again HPB hydrofoil	15-v5n1-1985	p. 16
twenty-knot design, Brooks	19-v6n1-1987	p. 1, 8-14
foil transition sequence, Drela	31-v9n3-1991	p. 7
folding bicycles		
folding-recumbent, Andrews	37-v11n2-1994	p. 18-21
review, Milkie	10-v3n1-1984	p. 19
Foley, John, Seacycle HPB	28-v8n4-1990	p. 19-20
Forbes, Vernon		
offset rims, dish	50-2000	p. 10-14
Sturmey-Archer, elegy	55-2004	p. 16-18, 20-23
wheel dish, hubs	47-(no. 46)-1998	p. 8-10
force, velocity & power relation	55-2004	p. 5
fork angle	15-v5n1-1985	p. 3
frames		
optimization, Chan	24-v7n3-1988	p. 6-8
tack-welding frames	13-v3n4-1985	p. 1, 4
freeway, human power on the	06-winter 80/81-1980	p. 1, 2
front-wheel-drive recumbents	30-v9n2-1991	p. 11-19
Fuchs, Andreas, stability, perf.	37-v11n2-1994	p. 11-13
Fuchs, Joachim, velomobiles	51-2001	p. 20-22
Gartside, Tim, Bluebell	09-v2n2-1983	p. 6, 7, 16
Gast, Augustus, hull shapes, kawak	31-v9n3-1991	p. 19-20
gear selection, automatic	55-2004	p. 7-10
generator, pedaled		
for bicycle lighting	49-1999	p. 7-11

trans-Atlantic sailboat race	11-v3n2-1984	p. 14
Gerristen, Marten, & Meijers		
Café Racer	20-v6n2-1987	p. 7-9
HPB races	27-v8n1(2)-1990	p. 21-22
Gloger, Stefan, Schmidt & Fuchs	43-v12n4-1997	p. 19-21
goals, rules and innovation	20-v6n2-1987	p. 1, 13-18
Gongwer, Calvin		
Aqueon fast-swimming aid	18-v5n4-1986	p. 7
foil propulsion	17-v5n3-1986	p. 5-6
Gorman, Timothy J. 3-wheel strng.	43-v12n4-1997	p. 13-17
Gossamer		
Albatross	02-winter 78/79-1978	p. 2
Condor	01-v1n1-1977	p.4
Condor and Albatross	16-v5n2-1986	p. 3
graphite-epoxy in a submarine hull	35-v10n4-1993	p. 19-23
Gravelle, Brent L. & Powell, arm	32-v10n1-1992	p. 19-21
gravity, effects on performance	46-v13n3-1998	p. 10
Hammon, George II, prize donor	10-v3n1-1984	p. 14
hand power, auxiliary, on bicycle	47-(no. 46)-1998	p. 11-13
Handcycles, New England	10-v3n1-1984	p. 9
handicapped riders		
HuDyN	16-v5n2-1986	p. 14
pedaling adaptation	13-v3n4-1985	p. 14-16
headers, from bicycles, Matteson	51-2001	p. 6-8
Helfrich, master framebuilder	12-v3n3-1985	p. 9-10
helicopters <i>see HP helicopters</i>		
Henaff, Y. Le		
dynamic stability	19-v6n1-1987	p. 15-19
stability corrections	21-v6n3-1987	p. 6
Higgins, Japan Birdman rally	41-v12n2-1995	p. 3-6
highlights (photos) 1980	06-winter 80/81-1980	p. 4, 5
high-speed flight optimization	19-v6n1-1987	p. 5-6
history		
IHPVA	01-v1n1-1977	p. 10, 19
Velocar history, Schmitz	38-v11n3-1994	p. 3-9
supplement, Schmitz	50-2000	p. 22
Velocar variations, Schmitz	49-1999	p. 3-6
Hoge, Bert & Jeroen Schasfoort	50-2000	p. 18-19
Holmes, Bruce J. & Obara, flow	31-v9n3-1991	p. 20
homeless, vehicles for	22-v7n1-1988	p. 10-11
Hon, David	10-v3n1-1984	p. 19
Hostetter, Daniel, Dragonfly HPB	28-v8n4-1990	p. 5-6
hour record		
early racers, Schmitz	38-v11n3-1994	p. 6-9
Bram Moens	39-v11n4-1994	p. 3
House, Al	10-v3n1-1984	p. 8, 9
house-boat "Escargot", HP	55-2004	p. 22-23
how to finish second	04-summer/fall 79-1979	p. 3
Hoyt, Garry		
book and boat	18-v5n4-1986	p. 14-15
Waterbug	15-v5n1-1985	p. 7-8
Waterbug designer	13-v3n4-1985	p. 10
HP aircraft		
Airglow, Roper	29-v9n1-1991	p. 1
Airglow, McIntyre	30-v9n2-1991	p. 20-24
ChicK-2000, Active Gals	52-2001	p.16-18
comparison le, McIntyre	30-v9n2-1991	p. 21-22
conference, Royal Aero Soc.	29-v9n1-1991	p. 22



Daedalus dra	24-v7n3-1988	p. 5, 8
design and test, Airglow	30-v9n2-1991	p. 20-24
flight history and status, Roper	32-v10n1-1992	p. 3, 11-12
Gossamer Albatross	02-winter 78/79-1978	p. 2
Gossamer Condor	01-v1n1-1977	p.4
Gossamer Condor and Albatross	16-v5n2-1986	p. 3
long flights, human factors	18-v5n4-1986	p.8-12
Michelob Light Eagle & Daedalus	21-v6n3-1987	p. 1
MLE first flights	18-v5n4-1986	p. 1, 4
Monarch	10-v3n1-1984	p. 1, 3
Monarch B	12-v3n3-1985	p. 21-24
Musculair 1 & 2		
HPA optimization	16-v5n2-1986	p. 1, 7-11
technical data	16-v5n2-1986	p. 9
optimization, Schoberl	19-v6n1-1987	p. 4-7
Phoenix, To, F. E.	13-v3n4-1985	p. 17-18, 2
review Paul MacCready	10-v3n1-1984	p. 18
Rochelt HPA	15-v5n1-1985	p. 11
for sport, conference	42-v12n3-1996	p. 22
White Dwarf airship	12-v3n3-1985	p. 1, 4-5
HP boats		
around-world design	29-v9n1-1991	p. 23-24
boat ridden as a bicycle, Witt	44-v13n1-1997	p. 3-6
boating, four years' experience	11-v3n2-1984	p. 12-13
boats and subs, human powered	03-summer 79-1979	p. 6
design, Danta	01-v1n1-1977	p.8-9
canal cruising, HPB, Thiel	24-v7n3-1988	p. 15
"Escargot" HP canal barge	55-2004	p. 22-23
pedal power on French canals	29-v9n1-1991	p. 4
Design experience, Bishop	27-v8n1(2)-1990	p. 20-21
Du Pont HPB prize, Eliasohn	27-v8n1(2)-1990	p. 8-9
hull shapes, kawaks, A. Gast	31-v9n3-1991	p. 19-20
hull shapes, Bishop	29-v9n1-1991	p. 5
Hydro Challenge, announcement	08-v2n1 – 1982	p. 2
Hydro Challenge HPB races	09-v2n2-1983	p. 2
Japan races	36-v11n1-1994	p. 3-5
Lauwesoo, races 1989	27-v8n1(2)-1990	p. 21-22
London-to-Paris pedaling	16-v5n2-1986	p. 15
low energy, Theo Schmidt	28-v8n4-1990	p. 4
Madeline sidewheeler HPB	11-v3n2-1984	p. 9
photo, plan	12-v3n3-1985	p.17
moving-skin boats		
submerged buoyancy, Schmidt	12-v3n3-1985	p. 7-8
winning Du Pont prize, Schmidt	27-v8n1(2)-1990	p. 7
pedal power on French canals	29-v9n1-1991	p. 4
regatta, first	10-v3n1-1984	p. 7, 8
Sea Saber, Knapp, HP proa	17-v5n3-1986	p. 4
screw propulsion of HPBs	23-v7n2-1988	p. 18
semi-submersible HPB	12-v3n3-1985	p. 8-9
shafts, propeller, bendy, for HPBs	34-v10n3-1993	p. 11-12
speed prizes, Du Pont	27-v8n1(2)-1990	p. 4-5
Spinsurfer design, Sewart	27-v8n1(2)-1990	p. 24
status report, Doug Milliken	39-v11n4-1994	p. 15-17
Vel'Eau 12	54-2003	p. 12-13
HP helicopters		
Da Vinci, Patterson	55-2004	p. 19-20
design studies	24-v7n3-1988	p. 1, 10-11
Dragonfly, systems design, Cary	40-v12n1-1995	p. 9-15

new HPH rules, Patterson, Roper	55-2004	p. 20
optimum pilot, Drela	48-1999	p. 20
review, Akira Naito	30-v9n2-1991	p. 1, 7-9
“YURI”, Akira Naito	37-v11n2-1994	p. 3
Yuri HP helicopter, Patterson	55-2004	p. 19
HP hydrofoil boats		
control, water pressure	52-2001	p. 14-15
Decavitator, Drela	31-v9n3-1991	p. 3, 5-9
design	19-v6n1-1987	p. 10
Flying Fish		
breaking 2000-m record	17-v5n3-1986	p. 1, 5
development, Brooks	11-v3n2-1984	p. 1, 7, 8
version II, Eliasohn	27-v8n1(2)-1990	p. 8
Foiled Again HPB hydrofoil	15-v5n1-1985	p. 16
foil transition sequence, Drela	31-v9n3-1991	p. 7
Hydra-ped performance, Shutt	25-v7n4-1989	p. 5-7
Hydroped III, Eliasohn	27-v8n1(2)-1990	p. 8-9
Mutiny on the Boundary Layer		
report	17-v5n3-1986	p. 5
Parker MacCready paper	27-v8n1(2)-1990	p. 9-10, 13-16
racing (Owers)	12-v3n3-1985	p. 11-16
record broken	17-v5n3-1986	p. 1
tandem, Yamaha, 1997	45-v13n2-1998	p. 22
twenty-knot design, Brooks	19-v6n1-1987	p. 1, 8-14
HP pioneer from France, Riley	43-v12n4-1997	p. 18-19
HP submarines		
APL submarine	27-v8n1(2)-1990	p. 1, 16-20
comparisons, Brandt	33-v10n2-1992	p. 11-13
design & fabrication	35-v10n4-1993	p. 3-7
design parameters	35-v10n4-1993	p. 24-27
design process	35-v10n4-1993	p. 9-14
dry, O’Neil	22-v7n1-1988	p. 17
hull profiles, Osse	27-v8n1(2)-1990	p. 17-18
hull, graphite-epoxy	35-v10n4-1993	p. 19-23
review	27-v8n1(2)-1990	p. 1, 16-20
second intl., Brandt	31-v9n3-1991	p. 34-37
Spirit of Annapolis	35-v10n4-1993	p. 17-19
submarine design, Poole	35-v10n4-1993	p. 24-27
Torpedo II submarine design	35-v10n4-1993	p. 3-7
Triton & Deep Purple	33-v10n2-1992	p. 11-13
review of submarine race	31-v9n3-1991	p. 34-37
Victory design	35-v10n4-1993	p. 15-16
<i>Also see submarines</i>		
HP trackways, John Barber	53-2002	p. 6
HP vehicles		
Aerocoupe	10-v3n1-1984	p. 13
aluminum recumbents (Eliasohn)	36-v11n1-1994	p. 10-13
Avatar 2000, Bluebell	09-v2n2-1983	p. 6, 7, 16
Bean recumbent bicycle design	25-v7n4-1989	p. 11-15
building, Eliasohn	15-v5n1-1985	p. 8-9
Cha-Cha FWD recumbent	30-v9n2-1991	p. 16-17
Cheetah		
team breaks 200-m record	33-v10n2-1992	p. 3-4
world record sprint	34-v10n3-1993	p. 12-14
Counterpoint	10-v3n1-1984	p. 13
Cutting Edge specifications	38-v11n3-1994	p. 14
cyclecar “Pedeluxe”, Whitehead	42-v12n3-1996	p. 15-16
definition, discussions	32-v10n1-1992	p. 4-10

definitions, Rob Price	31-v9n3-1991	p. 13-18
Doppler aluminum recumbent	36-v11n1-1994	p. 10-12
Easy Racer		
Du Pont prize won	16-v5n2-1986	p. 6
history	09-v2n2-1983	p. 7, 8
photo 1984	10-v3n1-1984	p. 12
faired production vehicles		
bicycles	34-v10n3-1993	p. 10
tricycles, Fuchs	51-2001	p. 20-22
Flevo FWD bike, trike, Brinke	30-v9n2-1991	p. 15-16
folding-recumbent, Andrews	37-v11n2-1994	p. 18-21
FWD recumbents, Traylor	30-v9n2-1991	p. 18-20
Leitra tricycle, safety tests	15-v5n1-1985	p. 14-15
Lightning F-40	24-v7n3-1988	p. 16-18
Lightning X-2, photo	10-v3n1-1984	p. 13
lightweight HPV development	43-v12n4-1997	p. 19-21
Lotus(Burrows)	33-v10n2-1992	p. 3-4
Merkur LWB plans, Stiffel	26-v8n2(1)-1990	p. 4-5, 14-16
Northrop University HPVs	02-winter 78/79-1978	p. 5
Pegasus	10-v3n1-1984	p. 12, 13
photos, 1975-1977	01-v1n1-1977	p. 12-15
prone-position recumbents		
Abbott	23-v7n2-1988	p. 1, 11-13
Martin	02-winter 78/79-1978	p. 5
rear-wheel steering		
recumbent bicycles	26-v8n2(1)-1990	p. 6-7, 17-20
theory	28-v8n4-1990	p. 9-12
Rotator recumbent	37-v11n2-1994	p. 22-23
science, Dave Wilson	54-2003	p. 4-14
Speedies & other Burrows HPVs	15-v5n1-1985	p.6
streamliners, first, Schmitz	38-v11n3-1994	p. 5-9
thirties, in the, Baxter	24-v7n3-1988	p. 23-24
Thuner Trampelwurm	54-2003	p. 11-12
tricycle, recumbent, Armstrong	40-v12n1-1995	p. 5-8
Triflex speed vehicle	05-spring 80-1980	p. 4, 5
Union Vector 007, world record	25-v7n4-1989	p. 10
Utkin, Marek, FWD recumbent	30-v9n2-1991	p. 15
Van Valkenburgh, HPV	02-winter 78/79-1978	p. 5
Vector		
Vector I, world's fastest HPV	03-summer 79-1979	p 4, 5
Vector II	04-summer/fall 79-1979	p. 4, 5
Velocar designs	38-v11n3-1994	p. 3-9
Velocar variations	49-1999	p. 3-6
Hreno, Terry		
part-faired HPVs	10-v3n1-1984	p. 15-17
molding & design	13-v3n4-1985	p. 4-9
hub-gears		
efficiency, and derailleurs	52-2001	p. 3-11
planetary transmissions	49-1999	p. 12-14
Reilly, William, inventor	55-2004	p. 17
run-in conditions important	55-2004	p. 11
Sturmey-Archer, no-slip, Forbes	55-2004	p. 18
hub tests, measurement accuracies	55-2004	p. 11
Human Power future, Wilson	52-2001	p. 23
Human-Power Institute, notice	55-2004	p. 15
human-power museum exhibit	50-2000	p. 21-22
hybrid vehicles and human power	16-v5n2-1986	p. 4-
Hydro Challenge HPB	09-v2n2-1983	p. 2

hydrodynamic design of foil HPB	11-v3n2-1984	p. 7, 8
hydrofoil HPBs <i>see HP hydrofoils</i>		
ice		
scooter, Theo's mini	53-2002	p. 21
traction on, HPVs	18-v5n4-1986	p. 13
IHPSC (speed championships)		
British view	07-fall 81-1981	p. 1, 14
eighth IHPSC	09-v2n2-1983	p. 1, 4, 5
Indianapolis races, photos	10-v3n1-1984	p. 11-14
Koln review, Wilson	44-v13n1-1997	p. 9-11
1978	01-v1n1-1977	p. 9
1979	02-winter 78/79-1978	p. 1
photo finishers, 7 <sup>th</sup> HPSC, 1981	07-fall 81-1981	p. 6-12, 15
6 <sup>th</sup> , 1982, plans	08-v2n1 – 1982	p. 2
IHPVA		
California orientation	08-v2n1 – 1982	p. 4
history of IHPVA	01-v1n1-1977	p. 10, 19
Lelystad HPV meeting report	42-v12n3-1996	p. 12
local chapters, formation of	08-v2n1 – 1982	p. 4
officers, 1977-78	01-v1n1-1977	p. 11
paradigm shift, IHPVA, Sharp	41-v12n2-1995	p. 18-21
public-relations report	03-summer 79-1979	p. 6
racing rules, IHPVA, Hack	39-v11n4-1994	p. 10
Illich, Ivan, re HP, energy, equity	45-v13n2-1998	p. 10-11
inflale HPA: Phoenix	13-v3n4-1985	p. 17-18, 20
infrared measurements chain losses	50-2000	p. 7-8
insurance industry and litigation	53-2002	p. 14
interference drag on two bodies	47-(no. 46)-1998	p. 20-21
Iraq war and HPVs, Schmidt	54-2003	p. 2-3
Jakobsen, Einar, foil propulsion	17-v5n3-1986	p. 7-9
Japan news, Toshio Kataoka	33-v10n2-1992	p. 19
Japanese HPV competition	02-winter 78/79-1978	p. 7
Joyrider pedal mechanism	13-v3n4-1985	p. 14-16
Juden, Chris, how thin can rims get	44-v13n1-1997	p. 20
Kaplan, Zach		
climbing ability	45-v13n2-1998	p. 22
comments, fairings	44-v13n1-1997	p. 21
discussion of papers	46-v13n3-1998	p. 16-17
Kehoe, Dave, fairing tests	28-v8n4-1990	p. 15-18
Kingsbury, John, photo, interview	33-v10n2-1992	p. 7
Kingsbury, Miles		
Bean devt.	25-v7n4-1989	p. 11-15
Cycloid drive	26-v8n2(1)-1990	p. 8-9
Kirschner, Daniel, arm power	53-2002	p. 7-10
Klumpp, Allan, exotic bike wheels	34-v10n3-1993	p. 3-8
Knapp, Jon		
Sabre Proa	11-v3n2-1984	p. 12-13
Whistler HPV, pedaled	17-v5n3-1986	p. 3
Koenekamp, phantom trailer	47-(no. 46)-1998	p. 3-4
Koren, aero effects, partial fairings	39-v11n4-1994	p. 20
Kremer competitions		
cross-Channel prize	02-winter 78/79-1978	p. 2
Gossamer Condor	01-v1n1-1977	p. 4
marathon, seaplane prizes	30-v9n2-1991	p. 6
Monarch B	12-v3n3-1985	p. 21-24
prize, third	10-v3n1-1984	p. 1, 3
speed prize (Monarch B)	12-v3n3-1985	p. 21-24
competitors	12-v3n3-1985	p. 22-23

Musclair	16-v5n2-1986	p. 8
Kretschmer, Thomas, direct drive	49-1999	p. 11-14
Krygowski, Frank, & Don Slanina	49-1999	p. 7-11
Kyle, Chester.		
prone vs supine	23-v7n2-1988	p. 13-15
research	02-winter 78/79-1978	p. 4
Rohloff gear tests	55-2004	p. 14-15
transmission tests, with Berto	52-2001	p. 3-11
Kyrow seat and HPB propulsion	17-v5n3-1986	p. 3
Lafford, John, rolling resistance	50-2000	p. 14-18
Lallement vs. Michaux (editorial)	32-v10n1-1992	p. 2
Lam, Duhane, et al, hand power	47-(no. 46)-1998	p. 11-13
Lambie, Jack, co-founder, IHPVA	17-v5n3-1986	p. 2
laminar flow		
HP submarines	09-v2n2-1983	p. 16
suction, from	15-v5n1-1985	p. 7
Lang, Frederic, prize donor	10-v3n1-1984	p. 14
Langford, John		
Daedalus	18-v5n4-1986	p. 1, 4
MIT Monarch B	12-v3n3-1985	p. 21-24
Larrabee, E. Eugene, Prof.		
Mr. Propeller (Gene Larrabee)	12-v3n3-1985	p. 5
propeller	50-2000	p. 20
propellers	54-2003	p. 17-20
propellers for HPVs	11-v3n2-1984	p. 9-11
remembrance	54-2003	p. 16-17
Larrington, Dave, "K" Drive review	48-1999	p. 25-27
lawn mowers, HP		
Eliasohn	39-v11n4-1994	p. 21-22
Wilson	54-2003	p. 10-11
Lebsack, Jon, FWD recumbent	30-v9n2-1991	p. 11-13
leg power		
recumbent cycling	46-v13n3-1998	p. 6-13
correction to above entry	47-(no. 46)-1998	p. 14
recumbents, comments	49-1999	p. 24-25
leg sweepout volume, drag, cooling	29-v9n1-1991	p. 18
Leier, Tim, cross-wind aero gain	33-v10n2-1992	p. 17-18
Leitra tricycle, safety tests	15-v5n1-1985	p. 14-15
Lelystad HPV meeting report	42-v12n3-1996	p. 12
Lightning F-40	24-v7n3-1988	p. 16-18
Lightning X-2, photo	10-v3n1-1984	p. 13
lightweight HPV development	43-v12n4-1997	p. 19-21
local chapters, formation of	08-v2n1 – 1982	p. 4
London-to-Paris pedaling	16-v5n2-1986	p. 15
long-distance flights, human factors	18-v5n4-1986	p.8-12
MacCready, Parker		
hydrofoil HPB	27-v8n1(2)-1990	p. 9-10, 13-16
Parker, on foils	17-v5n3-1986	p. 5
MacCready, Paul		
goals, rules	20-v6n2-1987	p. 1, 13-18
Gossamer Condor	01-v1n1-1977	p. 4
new species	17-v5n3-1986	p. 10
Madeline		
photo, plan	12-v3n3-1985	p. 17
sidewheeler HPB	11-v3n2-1984	p. 9
Mallard, sea test of (HPB)	18-v5n4-1986	p. 14-15
Martin, Gardner, prone HPV	02-winter 78/79-1978	p. 5
Martinson, John, Olsen's Rowbike	40-v12n1-1995	p. 3-4

materials selection	15-v5n1-1985	p. 4-5
Matteson, Frederick H., pitchover	51-2001	p. 6-8
McCarragher, Brenan J., stability	21-v6n3-1987	p. 4-5, 13-16
McCarthy, Rory	10-v3n1-1984	p. 9
McConica, rolling drag	15-v5n1-1985	p. 12-13
McGriff, Thomas, & HuDyN HPVs	16-v5n2-1986	p. 14
McIntyre, J., Airglow HPA design	30-v9n2-1991	p. 20-24
measurement accuracies, hub tests	55-2004	p. 11
medical, scientific aspects, cycling	17-v5n3-1986	p. 11-12
Merckx, Eddy	01-v1n1-1977	p. 19
Messenger, Des, handicapped	13-v3n4-1985	p. 14-16
Michaux vs. Lallement (editorial)	32-v10n1-1992	p. 2
Michelob Light Eagle & Daedalus		
Daedalus rollout	21-v6n3-1987	p. 1
MLE first flights	18-v5n4-1986	p. 1, 4
Milkie, Tom	10-v3n1-1984	p. 18-20
Milliken, Doug		
fairings comment	29-v9n1-1991	p. 17-18
flat-tire perf.	29-v9n1-1991	p. 17
HPB prizes	27-v8n1(2)-1990	p. 4-5
optimum bodies	48-1999	p. 16
stability, control	24-v7n3-1988	p. 9
status report on watercraft	39-v11n4-1994	p. 15-17
minimum induced loss, propellers	11-v3n2-1984	p. 10
MIT Monarch B, Kremer prize	12-v3n3-1985	p. 21-24
mobility for handicapped,	23-v7n2-1988	p. 16-17
Mochet, Charles & family	38-v11n3-1994	p. 5-9
Modak, J. P. & A. R. Bapat	54-2003	p. 21-23
Modak, J.P. and Moghe, bricks	45-v13n2-1998	p. 3-8
Moens, Bram		
photo, interview	32-v10n1-1992	p. 6
world hour record	39-v11n4-1994	p. 3
mold plug, making	23-v7n2-1988	p. 7
molding, fiberglass	13-v3n4-1985	p. 4
Monarch MIT HPA	10-v3n1-1984	p. 1, 3
motor-assisted rickshaws	49-1999	p. 16-18
Moulton conversion, Schmitz	49-1999	p. 4-5
moving-skin boats		
submerged buoyancy, Schmidt	12-v3n3-1985	p. 7-8
winning Du Pont prize, Schmidt	27-v8n1(2)-1990	p. 7
Mr. Propeller (Gene Larrabee)	12-v3n3-1985	p. 5
multihulls, stability, Bob Stuart	46-v13n3-1998	p. 3-4
Musculair 1 & 2		
HPA optimization	16-v5n2-1986	p. 1, 7-11
Rochelt HPA	15-v5n1-1985	p. 11
technical data	16-v5n2-1986	p. 9
musculoskeletal biomechanics	46-v13n3-1998	p. 7-8
Mutiny on the Boundary Layer		
Parker MacCready paper	27-v8n1(2)-1990	p. 9-10, 13-16
report	17-v5n3-1986	p. 5
Naito, Ahira		
HP helicopters	30-v9n2-1991	p. 1, 7-9
Nihon, HP helicopter	16-v5n2-1986	p. 16
Parade of Cranes	31-v9n3-1991	p. 38
(photo), Roper	39-v11n4-1994	p. 19
Nanos, Paul, prize donor	10-v3n1-1984	p. 14
Netherlands HPV competitions	10-v3n1-1984	p. 10, 15
New England Handcycles	10-v3n1-1984	p. 9

new HPH rules, Patterson, Roper	55-2004	p. 20
nineteen-eighty photo highlights	06-winter 80/81-1980	p. 4, 5
Nobile, John		
Breeze-Cheater fairing	22-v7n1-1988	p. 4-5
fairing ventilation	20-v6n2-1987	p. 5-6
Northrop University HPVs	02-winter 78/79-1978	p. 5
no-slip hub gears, S-A, Forbes	55-2004	p. 18
Nowiszewski, Carl	11-v3n2-1984	p. 14
oars and riggers		
articulated	12-v3n3-1985	p. 3
experiments	12-v3n3-1985	p. 2-3
octogenarian cyclist, Ron Beams	40-v12n1-1995	p. 16,
	41-v12n2-1995	p. 12-15
off-road HPV, Animas 96 Fisher	42-v12n3-1996	p. 3-6
Oh for the wings. . Arthur C. Clarke	21-v6n3-1987	p. 19-20
Olympic bicycle project	09-v2n2-1983	p. 1, 10, 11
optimal gear selection, automatic	55-2004	p. 7-10
optimum joint angles for pedaling	55-2004	p. 4
optimum anatomy for bicyclists	48-1999	p. 16
oscillating-foil propulsion		
boats	30-v9n2-1991	p. 3
Mutiny on Boundary Layer	27-v8n1(2)-1990	p. 9-10, 13-16
submarine, Brandt	31-v9n3-1991	p. 35-36
Osse, James, HP submarines	27-v8n1(2)-1990	p. 1, 16-20
Ott, Richard, Water Strider HPB	11-v3n2-1984	p. 15
Ott, William, prize donor	10-v3n1-1984	p. 14
outboard-drive alternatives, Thiel	28-v8n4-1990	p. 6-8
oval pedal circle, review, Larrington	48-1999	p. 25-27
Owers, David J. (hydrofoil HPB)	12-v3n3-1985	p. 11-16
Foiled Again HPB	15-v5n1-1985	p. 16
oxygen uptake, recumbent		
cost of recumbent exercise	21-v6n3-1987	p. 7, 17-18
comments	22-v7n1-1988	p. 9
recumbent vs. upright	45-v13n2-1998	p. 17
use of oxygen	08-v2n1 – 1982	p. 3
paddlewheel additions (omitted)	31-v9n3-1991	p. 9
Madeline, Thiel	29-v9n1-1991	p. 19-21
paddlewheels, how to build	29-v9n1-1991	p. 1, 9-16
Palombo, Mario, tricycles	02-winter 78/79-1978	p. 5, 6
Papadopoulos, Jim		
drag approximations	48-1999	p. 10-13
interference	47-(no. 46)-1998	p. 20-21
spoked wheels	16-v5n2-1986	p. 12
stability	19-v6n1-1987	p. 18
parachute drag, Snyder	51-2001	p. 13
paradigm shift, IHPVA, Sharp	41-v12n2-1995	p. 18-21
partial fairings		
aerodynamic effects	39-v11n4-1994	p. 20
HPV designs with, Hreno	10-v3n1-1984	p. 15-17
passing-vehicle effects	09-v2n2-1983	p. 11
Patroni, Anthony L., new drive	18-v5n4-1986	p. 20
Patterson, Wm. B., HP helicopter	55-2004	p. 19-20
Pease, Gerald E. , practical HPVs	24-v7n3-1988	p. 16-18
pedal height and crosswind effect	16-v5n2-1986	p. 3
pedaling		
oval, review, Larrington	48-1999	p. 25-27
power & efficiency	11-v3n2-1984	p. 5
rate, load & power	55-2004	p. 5

torque variations in pedaling	55-2004	p. 11-12
Pedalroller propulsion for HPBs	28-v8n4-1990	p. 6-8
pedicabs, increase in the occident	53-2002	p. 19
Pegasus	10-v3n1-1984	p. 12, 13
Phoenix inflatable HPA	13-v3n4-1985	p. 17-18, 20
physiological limits, long durations	25-v7n4-1989	p. 1, 8-10
pitchover, bicycle, characteristics	51-2001	p. 6-8
Pivit, Rainer, vibrational stress	23-v7n2-1988	p. 4-6
planetary transmissions	49-1999	p. 12-14
plastic-sheet forming	09-v2n2-1983	p. 12
politics, Ballantine	54-2003	p. 3
Poole, Patrick K		
propeller design	29-v9n1-1991	p. 6-8
submarine design	35-v10n4-1993	p. 24-27
Positech brake	53-2002	p. 15-17
Powell, Richard, & T. Robinson	21-v6n3-1987	p. 8-9, 18
power		
maximum, from humans	45-v13n2-1998	p. 18-19
recumbents, Hoge	50-2000	p. 18-19
required in velodrome tests	43-v12n4-1997	p. 8
requirements, hydrofoils	12-v3n3-1985	p. 14-15
cadence, ergometer, gear, vs.	37-v11n2-1994	p. 8-10
speed for HPAs, vs.	15-v5n1-1985	p. 11
use, cycling, spreadsheet	48-1999	p. 13-15
practical + efficient HPVs		
competition announcement	08-v2n1 – 1982	p. 2
recent progress, Pease	24-v7n3-1988	p. 16-18
recumbent “Vilostar”	20-v6n2-1987	p. 4-5
vehicle competition	09-v2n2-1983	p. 8
Preposterous Pogo Foil	27-v8n1(2)-1990	p. 15-16
Pressodyne II, way-up to way-down05-spring 80-1980		p. 3
Price, Rob		
steering and suspension	24-v7n3-1988	p. 18-22
what is/is not an HPV	31-v9n3-1991	p. 13-18
product-liability litigation, Wilson	53-2002	p. 10-19
prone-position recumbents		
Abbott	23-v7n2-1988	p. 1, 11-13
Martin	02-winter 78/79-1978	p. 5
propeller		
blade manufacture	44-v13n1-1997	p. 6-9
design for HPBs, Poole	29-v9n1-1991	p. 6-8
design and test, HPB	20-v6n2-1987	p. 10-11
efficiency, measurement, Bishop	27-v8n1(2)-1990	p. 11-13
for HPVs, Larrabee	11-v3n2-1984	p. 9-11
minimum loss	54-2003	p. 17-20
-performance program	23-v7n2-1988	p. 8-10
simulation program	48-1999	p. 3-7
theory, Larrabee	50-2000	p. 20
wooden, how to make	28-v8n4-1990	p. 1, 12-15
propulsion systems, submarine	27-v8n1(2)-1990	p. 19
public-relations report	03-summer 79-1979	p. 6
racing rules, IHPVA, Mark Hack	39-v11n4-1994	p. 10
Radloff, Stefan E. & John Henshaw	43-v12n4-1997	p. 9-12
rail event, HP, Laupen 1994	41-v12n2-1995	p. 16-17
Raine, J. K.		
energy, Amor	31-v9n3-1991	p. 26-33
ergometer tests	37-v11n2-1994	p. 4-10
models, Maxey	39-v11n4-1994	p. 4-10



Rajvanshi, Anil K., rickshaws	49-1999	p. 15-18
Raleigh management of Sturmey	55-2004	p. 17-18
range vs aerodynamics, electric	42-v12n3-1996	p. 9
Rasmussen, Carl Georg, Leitra	15-v5n1-1985	p. 14-15
Ready About! review (book)	18-v5n4-1986	p. 14
rear-wheel steering		
recumbent bicycles	26-v8n2(1)-1990	p. 6-7, 17-20
theory	28-v8n4-1990	p. 9-12
reciprocating drive for disabled	43-v12n4-1997	p. 9-12
record falls, 200-m flying start	33-v10n2-1992	p. 3-4
record, evolution of (50 mile/h)	04-summer/fall 79-1979	p. 6, 7
records		
broken, 5 <sup>th</sup> speed championships	03-summer 79-1979	p. 1, 8
hour record, early racers, Schmitz	38-v11n3-1994	p. 6-9
Moens, Bram	39-v11n4-1994	p. 3
1977	01-v1n1-1977	p. 16-18
speed records by year	09-v2n2-1983	p. 10
recumbent		
bicycles, 1930s	49-1999	p. 3-6
conventional cycling, vs.	21-v6n3-1987	p. 7, 17-18
racing, Les Earnest	41-v12n2-1995	p. 6
riders with disabilities, for	43-v12n4-1997	p. 9-12
track bike, Schmitz	49-1999	p. 5-6
Reilly, William, hub-gear inventor	55-2004	p. 17
Reiser, Raoul F. II, & Peterson	46-v13n3-1998	p. 6-13
research, bicycle & HPVs, German	16-v5n2-1986	p. 11
resources for HPVs (letter)	06-winter 80/81-1980	p. 3
Reswick, James B., Ride-a-Matic	18-v5n4-1986	p. 15-19
Reynolds-number calculations	54-2003	p. 6-8
riblets for turbulent drag reduction	16-v5n2-1986	p. 3
rickshaws		
new, for Bangladesh	17-v5n3-1986	p. 19-20
	18-v5n4-1986	p. 5-6,
	14-v4n4-1985	p. 27-28
demise in the orient	53-2002	p. 19
Indian, Rajvanshi	49-1999	p. 15-18
review of book	48-1999	p. 22-24
Ride-a-Matic transmission	18-v5n4-1986	p. 15-19
riding position and speed, Zwikker	26-v8n2(1)-1990	p. 1, 10-13
Riess, Falk & Rainer Pivitt, HPVs	22-v7n1-1988	p. 1, 12-14
rims		
braking wear, Chris Juden	44-v13n1-1997	p. 20
temperatures, comments	35-v10n4-1993	p. 8
temperatures in downhill braking	34-v10n3-1993	p. 15-18
Ritchie, Andrew, Major Taylor	20-v6n2-1987	p. 20
Roberts, Jim, recumbents on dirt	16-v5n2-1986	p. 13
Rochelt Musculaire II HPA	15-v5n1-1985	p. 11
Rochelt, Gunter, appreciation	47-(no. 46)-1998	p. 23
Rogers, Hartley, Jr., rowing	11-v3n2-1984	p. 3, 6
Rohloff gear tests	55-2004	p. 11-15
Rohloff, Bernhard & Peter Greb	55-2004	p. 11-15
roll stability, Fuchs	37-v11n2-1994	p. 13
rolling resistance		
small wheels	33-v10n2-1992	p. 15-16
three vs. two wheels	15-v5n1-1985	p. 12-13
tires, Lafford	50-2000	p. 14-18
Roper, Chris		
Airglow HPA	29-v9n1-1991	p. 1

history & status	32-v10n1-1992	p. 3, 11-12
report on 1994 AIAA mtg.	39-v11n4-1994	p. 18-19
report on HPA conf.	42-v12n3-1996	p. 22
Roy. Aero. Soc. conference.	29-v9n1-1991	p. 22
Rose, Sid, HPV record 1935	02-winter 78/79-1978	p. 8
Ross, Peter, photo, interview	33-v10n2-1992	p. 6
rotor, HPH, aerodynamic model	40-v12n1-1995	p. 11
rowing		
history of	11-v3n2-1984	p. 2
Olsen's Rowbike	40-v12n1-1995	p. 3-4
theoretical study	11-v3n2-1984	p. 3, 6
-action bicycle w. leg assist	38-v11n3-1994	p. 17-19
-action bicycles, Schreur	40-v12n1-1995	p. 3
Ruina, Andy, stability discussion	19-v6n1-1987	p. 18
Ruitenbeek, Marga A. B. Wave	44-v13n1-1997	p. 14-15
rules		
altitudes and records	44-v13n1-1997	p. 23
change proposal, response	33-v10n2-1992	p. 5-7
need for change, Sharp	32-v10n1-1992	p. 21-22
racing, recommendations	38-v11n3-1994	p. 20-22
wind, IHPVA, Buttemer	47-(no. 46)-1998	p. 21-22
run-flat performance of tires	53-2002	p. 13
run-in conditions important in loss	55-2004	p. 11
Saari, Michael		
drag-reduction tests	46-v13n3-1998	p. 18
human-electric	42-v12n3-1996	p. 7-12
Sabre Proa HPB	10-v3n1-1984	p. 7, 8
safety research in racing	10-v3n1-1984	p. 23
sailing		
bicycles, on, Sharp	48-1999	p. 8-9
thrust from fairings, Weaver	49-1999	p. 21-24
Scheller, Gerhard, world record	25-v7n4-1989	p. 10
Schoeberl, E.		
HPA optimization	19-v6n1-1987	p. 4-7
Musculair 1 & 2	16-v5n2-1986	p. 1, 7-11
Schmidlin, Dennis, rowing action	38-v11n3-1994	p. 17-19
Schmidt, Theo		
Amphiped HPB	17-v5n3-1986	p. 4
editorial farewell	55-2004	p. 2
Extra-energy expo.	42-v12n3-1996	p. 13-14
how to win prize	27-v8n1(2)-1990	p. 6-7
HPBs	27-v8n1(2)-1990	p. 2
hybrid vehicles	16-v5n2-1986	p. 4-5
ice scooter	53-2002	p. 21
Iraq war & HPVs	54-2003	p. 2-3
London-Paris	16-v5n2-1986	p. 15
propeller program.	23-v7n2-1988	p. 8-10
propeller simulation	48-1999	p. 3-7
rail event, Laupen, Sw.	41-v12n2-1995	p. 16-17
submerged-buoyancy HPBs	12-v3n3-1985	p. 6-9
Velocity AHPV review	41-v12n2-1995	p. 21-22
Schmitz, Arnfried		
Velocar designs	38-v11n3-1994	p. 3-9
Velocar variations	49-1999	p. 3-6
Schoendorf, Paul, HPVs	02-winter 78/79-1978	p. 7
Scholl, Ray, & Leibolt, sub design	35-v10n4-1993	p. 15-16
Schreur & Thijs, Rowfiets	40-v12n1-1995	p. 3
scientific symposia		

1 <sup>st</sup> , review	08-v2n1 – 1982	p. 5, 11, 12
2 <sup>nd</sup> , review	10-v3n1-1984	p. 18-20
HPV, 1981	07-fall 81-1981	p. 2
screw propulsion of HPBs	23-v7n2-1988	p. 18
Sea Saber, Knapp, HP proa	17-v5n3-1986	p. 4
seacraft, human-powered	01-v1n1-1977	p. 9
seat-to-pedal distance, Too	55-2004	p. 4
semi-submersible HPB	12-v3n3-1985	p. 8-9
Sewart, Bruce, Spinsurfer HPB	27-v8n1(2)-1990	p. 24
shaft drive on Daedalus, Cote	40-v12n1-1995	p. 21
shafts, propeller, bendy, for HPBs	34-v10n3-1993	p. 11-12
Sharp, Peter A.		
aero stabilizer	32-v10n1-1992	p. 12-13
Bodysail for bikes	48-1999	p. 8-9
energy storage	34-v10n3-1993	p. 19-23
racing rules	38-v11n3-1994	p. 20-22
shifting paradigms, IHPVA	41-v12n2-1995	p. 18-21
time for rules change	32-v10n1-1992	p. 21-22
wing sails	42-v12n3-1996	p. 19-20
shimmy, friction damping as cure	22-v7n1-1988	p. 6-8
short- vs. long-wheelbase	33-v10n2-1992	p. 14-15
Shutt, Sid		
Hydro-ped HPB	25-v7n4-1989	p. 5-7
propeller efficiency	27-v8n1(2)-1990	p. 11-13
sidewheeler HPB	11-v3n2-1984	p. 9
sidewind stability, Weaver	38-v11n3-1994	p. 12
Sikorsky, Igor, helicopter prize	16-v5n2-1986	p. 16
Sims, Ian, Greenspeed tire testing	42-v12n3-1996	p. 17-18
sinusoidal drive system Cycloid	26-v8n2(1)-1990	p. 8-9
skateboard coastdown competition	02-winter 78/79-1978	p. 3
snow removers, HP, Wilson	54-2003	p. 11
Snyder, John C., Jr		
drag tests	51-2001	p. 9-13
Ivan Illich review	45-v13n2-1998	p. 10-11
Sokomoto, Tory, photo, interview	32-v10n1-1992	p. 8
solar		
boat race, Japanese, first	26-v8n2(1)-1990	p. 3
solar plus human power	15-v5n1-1985	p. 4-5
Tour de Sol	15-v5n1-1985	p. 1, 4-5
source directory for HPVs	15-v5n1-1985	p. 2, 10-26
<i>Also see</i> Eliasohn	17-v5n3-1986	p. 13-18
South Africa HPV racing	09-v2n2-1983	p. 2
space, human power in, John Allen	46-v13n3-1998	p. 13-15
Spaulding, Donald W., HPB	29-v9n1-1991	p. 23-24
species, potential evolution of new	17-v5n3-1986	p. 10
speed championships		
British view	07-fall 81-1981	p. 1, 14
1978	01-v1n1-1977	p. 9
1979	02-winter 78/79-1978	p. 1
<i>See also IHPSC</i>		
speed records by year	09-v2n2-1983	p. 10
speed, boat, vs. power	11-v3n2-1984	p. 6
Speedies and other Burrows HPVs	15-v5n1-1985	p.6
Spicer, James B. et al, chain drives	50-2000	p. 3-9
Spinnetti, Ramondo	21-v6n3-1987	p. 1, 10-12
Spinsurfer HPB design, Sewart	27-v8n1(2)-1990	p. 24
spokes		
distributions & patterns	34-v10n3-1993	p. 3-8

fewer spokes, aero advantage	48-1999	p. 16-17
spoked-wheel response	16-v5n2-1986	p. 12
tension measurements, Allen	53-2002	p. 3-6
tensiometer & musical pitch	53-2002	p. 3-6
spray drag, hydrofoils	19-v6n1-1987	p. 9-10
Springwalker exoskeleton	52-2001	p. 12-13
Sri Lanka greetings, Wijewardene	49-1999	p. 26
s	ility and control	
bicycles	24-v7n3-1988	p. 9
control, comments	25-v7n4-1989	p. 16
front-tire deflation	51-2001	p. 16-18
	52-2001	p. 11
displacement boats	46-v13n3-1998	p. 3-5
dynamic, of bicycles	19-v6n1-1987	p. 15-19
headers, from bicycles, Matteson	51-2001	p. 6-8
off trail, Warren Berger	32-v10n1-1992	p. 16-18
performance, Fuchs	37-v11n2-1994	p. 11-13
stabilizer, aerodynamic, Sharp	32-v10n1-1992	p. 12-13
tip-over and skid limits, Fellenz	45-v13n2-1998	p. 8-10
Staubach, Martin		
drag on HPVs	36-v11n1-1994	p. 14-16
omitted table	40-v12n1-1995	p. 22
steering & suspension		
configuration for 3-wheel	43-v12n4-1997	p. 13-17
configuration, corrections	44-v13n1-1997	p. 13-14
design	24-v7n3-1988	p. 18-22
geometry, Des Messenger	15-v5n1-1985	p. 13
geometry, tricycles	15-v5n1-1985	p. 5-6
rear-wheel steering		
recumbent bicycles	26-v8n2(1)-1990	p. 6-7, 17
theory	28-v8n4-1990	p. 9-12
Stegman, John		
crank-arm length	52-2001	p. 21
fairings	02-winter 78/79-1978	p. 7
front-wheel drive	30-v9n2-1991	p. 11
photo, interview	32-v10n1-1992	p. 7
tire-rim fits	52-2001	p. 13-14
Stiffel, Merkur LWB plans	26-v8n2(1)-1990	p. 4-5, 14-16
stiffness of tubes, Zabriskie	45-v13n2-1998	p. 12-15
streamlining		
bicycles	01-v1n1-1977	p. 6-7
challenge to standard bicycles	04-summer/fall 79-1979	p. 1
HPV as road vehicle	43-v12n4-1997	p. 3-6
recumbent, Weaver	38-v11n3-1994	p. 10-16
streamliners, first, Schmitz	38-v11n3-1994	p. 5-9
stress, vibrational, on cyclists	23-v7n2-1988	p. 4-6
stressed-skin construction, Drela	52-2001	p. 17
Stuart, Bob, HPB stability	46-v13n3-1998	p. 3-5
Sturmey-Archer, elegy for, Forbes	55-2004	p. 16-18, 20-23
submarines		
comparisons, Brandt	33-v10n2-1992	p. 11-13
design & fabrication	35-v10n4-1993	p. 3-7
design parameters	35-v10n4-1993	p. 24-27
design process	35-v10n4-1993	p. 9-14
dry, O'Neil	22-v7n1-1988	p. 17
hull profiles, Osse	27-v8n1(2)-1990	p. 17-18
hull, graphite-epoxy	35-v10n4-1993	p. 19-23
review	27-v8n1(2)-1990	p. 1, 16-20

second intl., Brandt	31-v9n3-1991	p. 34-37
Spirit of Annapolis	35-v10n4-1993	p. 17-19
Victory design	35-v10n4-1993	p. 15-16
<i>Also see HP submarines</i>		
submerged-buoyancy boat	12-v3n3-1985	p. 6-9
surface-effect HPB Dragonfly III	28-v8n4-1990	p. 5-6
sustainable-transportation confrcn..	44-v13n1-1997	p. 19
Suverkropp, Wouter, Lelystad	42-v12n3-1996	p. 12
tack-welding frames	13-v3n4-1985	p. 1, 4
Taig, Alastair, hydrofoils	52-2001	p. 14-15
Tamai, Goro, drag components	45-v13n2-1998	p. 15-17
tandems		
double-recumbent, Allen	37-v11n2-1994	p. 22-23
recumbent design, Brown	48-1999	p. 19
Tatum, George, water molecules	53-2002	p. 19-20
Taylor, Major, champion bicyclist	20-v6n2-1987	p. 20
tensiometer & musical pitch, Allen	53-2002	p. 3-6
ten-speed fairings	10-v3n1-1984	p. 23
Tetz, John G.		
AHPV principles	39-v11n4-1994	p. 11-12
Minical spreadsheet	48-1999	p. 13-15
streamliner on roads	43-v12n4-1997	p. 3-6
Theory of Wing Sections	02-winter 78/79-1978	p. 4
Thiel, Philip		
boat: Dorycycle	11-v3n2-1984	p. 4-6
canal cruising	24-v7n3-1988	p. 15
Delft regatta 1988	24-v7n3-1988	p. 11-13
Escargot-class HPB	29-v9n1-1991	p. 4
HPB drives	28-v8n4-1990	p. 6-8
Japan	33-v10n2-1992	p. 2, 5
paddlewheel HPB	29-v9n1-1991	p. 19-21
reflections on HPBs	27-v8n1(2)-1990	p. 2
Sharp-Cycle	23-v7n2-1988	p. 18
wooden propeller	28-v8n4-1990	p. 1, 12-15
Thuner Trampelwurm	54-2003	p. 11-12
tip-over and skid limits, Fellenz	45-v13n2-1998	p. 8-10
tires		
flat-tire directional performance	29-v9n1-1991	p. 17
run-flat performance of tires	53-2002	p. 13
testing, Greenspeed, Iam Sims	42-v12n3-1996	p. 17-18
tire-rim compatibility, Stegmann	52-2001	p. 13-14
tire-scrub losses, Gorman	43-v12n4-1997	p. 14
To, F. E., Phoenix HPA	13-v3n4-1985	p. 17-18, 20
Tobias, Lynn	10-v3n1-1984	p. 3-7
Too, Danny, & Chris Williams	51-2001	p. 3-6
Too, Danny, and Gerald Landweir		
HPV biomechanical model	54-2003	p. 14-16
HPV biomechanics of force	55-2004	p. 3-6
Too, Danny		
crank-arm length	48-1999	p. 17-19
discussion on crank-arm length	52-2001	p. 20-22
papers on performance	47-(no. 46)-1998	p. 14-20
tools, HP, brick manufacture	45-v13n2-1998	p. 3-8
Torpedo II sub, design & constr.	35-v10n4-1993	p. 3-7
torque variations in pedaling	55-2004	p. 11-12
Tour de Sol Peter Ernst	15-v5n1-1985	p. 1, 4-5
trailer, bike, construction	19-v6n1-1987	p. 20-?
transmission, new automatic	18-v5n4-1986	p. 15-19

transmission efficiencies		
reviews of papers	45-v13n2-1998	p. 19
Rohloff & Greb	55-2004	p. 11-15
Spicer	50-2000	p. 3-9
Wilson	48-1999	p. 20-22
Trayling, Greg		
fairing mold plug	23-v7n2-1988	p. 7
helicopter	24-v7n3-1988	p. 1, 10-11
Traylor, Tom, FWD recumbents	30-v9n2-1991	p. 18-20
Treat, Herb, wind-noise reduction	32-v10n1-1992	p. 14-15
tricycle, recumbent, Armstrong	40-v12n1-1995	p. 5-8
Triflex speed vehicle	05-spring 80-1980	p. 4, 5
Trireme HPB	10-v3n1-1984	p. 7, 8
Tschentscher, Detlev, exoskeleton	52-2001	p. 12-13
Tustin Dog Days criterium	03-summer 79-1979	p. 7
200-m HPVs, 1979	03-summer 79-1979	p. 2, 3, 7
20-knot foil-borne HPBs, design	19-v6n1-1987	p. 1, 8-14
UCI		
recumbents, John Riley	30-v9n2-1991	p. 5-6
relations, Peter Ross	49-1999	p. 25
rules, 1914 and 1934, Schmitz	38-v11n3-1994	p. 8-9
Union Vector 007, world record	25-v7n4-1989	p. 10
urban commuter driving cycle	39-v11n4-1994	p. 6-9
Utkin, Marek, FWD recumbent	30-v9n2-1991	p. 15
Van Valkenburgh, HPV	02-winter 78/79-1978	p. 5
Vancouver IHPSC & HPBs	17-v5n3-1986	p. 1, 3-
Vector		
Vector I, world's fastest HPV	03-summer 79-1979	p. 4, 5
Vector II	04-summer/fall 79-1979	p. 4, 5
traveling with	09-v2n2-1983	p. 14
Veffler, Richard, bicycles & taxes	44-v13n1-1997	p. 22
Velocar		
history, Schmitz	38-v11n3-1994	p. 3-9
supplement, Schmitz	50-2000	p. 22
Velocar variations, Schmitz	49-1999	p. 3-6
velomobile design, Roskilde mtg.	46-v13n3-1998	p. 20-22
Joachim Fuchs	51-2001	p. 20-22
ventilation		
faired recumbent	38-v11n3-1994	p. 12
fairing ventilation and drag	20-v6n2-1987	p. 5-6
fairings, low-drag	38-v11n3-1994	p. 23
vibrational stress on cyclists	23-v7n2-1988	p. 4-6
VO2max tests vs. power	18-v5n4-1986	p.10-12
vortex propeller theory	11-v3n2-1984	p. 9
Vrielink, Johan, Flevo bike	30-v9n2-1991	p. 15-16
Walton, Claire L. & John C., chain	51-2001	p. 14-15
Warner, Bill	10-v3n1-1984	p. 8, 9
water molecules & independence	53-2002	p. 19-20
Water Strider HPBs	11-v3n2-1984	p. 15
water vehicles, HP boats	08-v2n1 – 1982. p. 2	
Waterbug HPB	13-v3n4-1985	p. 10
Watson, Bill, HPV	02-winter 78/79-1978	p. 6
Wave recumbent, Ruitenbeek	44-v13n1-1997	p. 14-15
wave-powered propulsion, HPBs	17-v5n3-1986	p. 9
Weaver, Matt		
Battle Mtn. cranks	52-2001	p. 19-21
Cutting Edge design	38-v11n3-1994	p. 10-16
fairing shapes	49-1999	p. 21-24

wheels		
design, exotic, comments	35-v10n4-1993	p. 2
dish correction	51-2001	p. 2
exotic, for strength,	34-v10n3-1993	p. 3-8
offset rims, Forbes	50-2000	p. 10-14
predicting from hubs	47-(no. 46)-1998	p. 8-10
wheelbase, long vs. short	15-v5n1-1985	p. 3
wheel-rim failures, Wilson	53-2002	p. 13
Whitehead, John C., RW steering	28-v8n4-1990	p. 9-12
Whitehead, Sidney, cyclecar	42-v12n3-1996	p. 15-16
Whitt, David, balancing HPB	22-v7n1-1988	p. 3
Whitt, Frank Rowland, papers	15-v5n1-1985	p. 2
Wijewardene, Ray	12-v3n3-1985	p. 18-20
Willkie, Fred, II		
new rickshaw for Bangladesh	14-v4n4-1985	p. 27-28
rickshaws for Bangladesh, I	17-v5n3-1986	p. 19-20
rickshaws for Bangladesh, II	18-v5n4-1986	p. 5-6
winter tricycles	13-v3n4-1985	p. 11-13, 20
Wilson, Dave & Andy Oury, tires	51-2001	p. 16-18
Wilson, Dave		
HPV science	54-2003	p. 4-14
IHPSC	44-v13n1-1997	p. 9-11
litigation	53-2002	p. 10-19
max. human power	45-v13n2-1998	p. 18-19
prop test	20-v6n2-1987	p. 10-12
recumbents	10-v3n1-1984	p. 19
rim temperatures	34-v10n3-1993	p. 15-18
Roskilde velomobile	46-v13n3-1998	p. 20-22
transmission efficiency	48-1999	p. 20-22
transmission efficiency	45-v13n2-1998	p. 19
wind-tunnel tests	43-v12n4-1997	p. 7-9
wind and HPV quadracycle, Flint	31-v9n3-1991	p. 21-25
wind tunnel		
testing of White Lightning05-spring	80-1980. p. 6, 7	
tests of bicycles	43-v12n4-1997	p. 7-9
who needs one?	06-winter 80/81-1980	p. 7, 8
wind-noise reduction, Treat	32-v10n1-1992	p. 14-15
corrections	33-v10n2-1992	p. 2
wings		
sails for HPVs, Sharp	42-v12n3-1996	p. 19-20
shape and structure, HPA	19-v6n1-1987	p. 6-7
winter		
meeting at Riverside	04-summer/fall 79-1979	p. 1
tricycles, Fred Willkie	13-v3n4-1985	p. 11-13, 20
Witt, David, boat ridden as bicycle	44-v13n1-1997	p. 3-6
Wolff, Otto E. (oars and riggers)	12-v3n3-1985	p. 2-3
Wolfgang Gronen	01-v1n1-1977	p. 19
Yanagihara, Tsuide, et al – HPBs	36-v11n1-1994	p. 3-5
yaw stability, Fuchs	37-v11n2-1994	p. 12-13
Yoshimawa, Toshiaki, HPA	52-2001	p. 16-18
Yuri HP helicopter, Patterson	55-2004	p. 19
Zabriskie, John, stiffness of tubes	45-v13n2-1998	p. 12-15
Zwikker, Bernd		
front-wheel drive (with Moens)	30-v9n2-1991	p. 16-17
riding position	26-v8n2(1)-1990	p. 1, 10-13