

the Sydney Cyclist



NEWSLETTER OF THE SYDNEY CYCLISTS' CLUB AND THE SYDNEY CYCLING CLUB

JULY 1986

"AMERICAN FLYER" CYCLE CLASSIC

Well, word is in that the AMERICAN FLYERS CYCLE CLASSIC was a huge financial success; as well as, a brilliant racing event. As you can see from the financial statement on page two, we worked with a big budget this year, and made a substantial profit (approximately \$1090). This years event has seen a rather more professional approach to its organisation, with outside assistance from SPORTS PLUS, gaining major sponsorship. Big budget, big profit!

The Executive Committee has proceeded to seek permission for use of the same circuit next year, and also for a Bicentennial event... And a search is underway for new members for a Race Committee for the future events, anyone interested should contact Michael Griffith.

It is interesting to note that the food stall, and frame raffle netted the Club about \$700; maybe we should just gain the food stall concession at local races next year!!! We must certainly thank Tony Cook at Clarence City Cyclery for donating a frame again this year.



ANOTHER ATTEMPT IS BEING MADE TO HAVE A CLUB JERSEY RIDE, THE LAST ONE BEING RAINED OUT. RIDERS (FROM ALL CATEGORIES) SHOULD MEET AT CENTENNIAL PARK ON SUNDAY MORNING 17 AUGUST, TO RIDE TO CRONULLA (SUR-LA-MER) WHERE ALL WILL CONVERGE FOR TEA AND BIKKIES, ETC. RIDERS MAY THEN TAKE THE TRAIN BACK TO THE CITY, OR RIDE BACK TO THE PARK...

CONTACT OWEN LOWE FOR FURTHER DETAILS...

DAY TOUR

IF THE GOULBURN TO LIVERPOOL CLASSIC HASN'T EXHAUSTED YOU, THERE WILL BE A ONE DAY RIDE ON THE FOLLOWING SUNDAY, 14 SEPTEMBER FOR MEMBERS WISHING TO LOG A FEW MILES...

THIS RIDE WILL START AT CENTENNIAL PARK AT 6:30 LEAVING FOR WISEMANS FERRY, AND ON TO WYONG. THIS IS A VERY SCENIC ROUTE GOING DOWN INTO THE YARRAMALONG VALLEY (GLUE YOUR SINGLES WELL!!!).

CONTACT BRUCE VOTE FOR FURTHER DETAILS...

THE BEST LAID PLANS.....

This edition began back in mid-June, but has gone from strength to strength in its motivation. Some of the articles are now rather dated but should still be of interest... Eds.

VIDEO NITE

THE NEXT CLUB MEETING WILL BE HELD ON 12 AUGUST AT JOHN BEAUCHAMP'S HOUSE, BEGINNING AT 7:30 PM. THERE WILL BE A SHOWING OF SELECTED VIDEOS, INCLUDING THE RECENTLY PRODUCED "AMERICAN FLYERS CYCLE CLASSIC" COVERAGE BY WORLD-FAMOUS VIDEOTOPHOTOGRAPHER ANDY DOLDISSEN. OTHER LESSER EVENTS SUCH AS THE TOUR DE FRANCE, ETC. WILL ALSO BE SHOWN...

PART OF THE MASSIVE PROFITS FROM THE CLUB'S RACE HAS BEEN BUDGETED TO PROVIDE REFRESHMENTS FOR THE EVENING. MARK YOUR CALENDAR, REAP THE BENEFITS OF YOUR HARD WORK AT THE RACE,....

Next Meeting

PREMIERSHIPS - Our Time Trialists Improve !!!

After a rather chequered series of training sessions, in which several of the squad proved less than faithful, the team made ready for their ride on Saturday morning, August 26. The N.S.W.A.C.U. added to the interest by making the venue a bit of a 'mystery location'. There was a spot of bother in gaining Police approval for a site for the annual event. The Castlereagh circuit has become too busy (traffic-wise) and no longer safe. Alternatives have been sought in the Metropolitan area, but apparently to no avail. A circuit was selected in Goulburn but was very unpopular with competitors; the site was then changed to Yanderra, but Police approval was not forthcoming. Finally, a stretch of road south of Nowra was chosen, and there our boys appeared early on Saturday morning...

The team consisting of Michael Griffith, Hugh Milner, Spencer White and Bruce Vote were seeded in 11th position (last), thus made the earliest start. They rode well to improve their position, but Spencer had to drop out with cramps, leaving the other three to gain on time. Interference from the local Nowra team got the adrenalin running, making them somewhat agro - but improving their times, so that they finished in ninth (9th) position.

After the event there were a few heated words with the Commissaire, regarding other team cars barging in front of a peloton, and hopefully Nowra will show a bit more common sense in the future.....

RESULTS (Veterans Teams)

Parramatta 1:12.54, Canberra 1:14.04, St George 1:15.38, Lidcombe 1:15.55, Hunter Dist 1:16.43, Sutherland 1:16.51, Nowra 1:17.15, Bankstown 1:19.47, Sydney 1:20.20, Goulburn 1:20.25, Manly 1:20.34

The Jersey!!!

After several attempts to gain a decision by **consensus** regarding the **new design** of a Club jersey, Michael Griffith quite firmly presented the designs which have been discussed during recent 'meetings' to obtain an approval for a **final design** which can be taken to a garment maker for final approval and pricing.

The design which was selected by the Executive Committee will be made from cotton backed lycra (thermodress) fabric, silkscreened with a design having diagonal stripes on the body - wide blue, narrow red on white; with white upper body and red sleeves, and blue trim on neck and sleeves.

Prices are now being obtained for a production run.....

SYDNEY CITY CRITERIUM

Financial Statement

Income

. Sponsorship Payment Sportsplus	\$2,580.00
Food Stall and Raffle	1,038.00
NSWACU	1,093.00
Walders Hire - Refund	29.29
Open Orders	<u>760.00</u>
	<u>\$5,420.29</u>

Expenditure

Sportsplus	\$ 588.74	
NSWACU - Bond	200.00	
.Walders Hire	213.14	
S.M.H. Advertisement	29.40	
Prize Money	2,175.00	
Prizes - Open Orders	760.00	
Food and Drink	261.00	
Float - Food Stall	40.00	
Photocopying, Courier,		
Postage and Sundries	<u>62.69</u>	
	\$4329.97	<u>\$4,329.97</u>
PROFIT		<u>\$1,090.32</u>

(\$5,420.29)

PREMIERSHIPS

During the past few weeks, there has been a concerted attempt to knock a Veterans Time Trials squad into shape. Paul Montesin has brought together a group composed of Michael Griffiths, Alan Revell, Malcolm Hammond, Hugh Milner and Bruce Vote to train on the road, and in Centennial Park for the N.S.W. Premierships (State Teams Time Trials Championships). Their enthusiasm was dampened a bit when they discovered this years venue was to be near Goulburn. Latest word has it that the venue has been changed back to the metropolitan area, and we hope to have a team representing the Club.

The event is to be held on 26 July; hopefully at Yanderra. Plan to get out there for the day - it's brilliant picnic and riding country - and support our lads.....

*** WANTED ***

A DEDICATED VOLUNTEER ON THE WEEKEND OF 27TH SEPT, FOR HANDLING DUTIES IN THE GRAFTON - INVERELL. RELIABLE CAR (MINE WON'T MAKE IT!), AND A DEGREE OF MADNESS NEEDED TO LOOK AFTER YOURS TRULY.

CONTACT: DAVE STAKES 692-9480 asap, As preparation has to start now to ride this grueling event.

FOR SALE

2 pr CINELLI 56-42 Handlebars excellent condition, P.O.A.

Contact: D. Stakes 692-9480

CANBERRA OLD BOYS

About two years the Canberra Clubs combined to form the Canberra Cycling Club, and they put on two weekend road events each year. One of these is still referred to by many as the "Old Boys Race" - being the veterans/ladies weekend. Bruce Vote has competed in this event for several years now, and has had an extremely enjoyable time each year. The weekend consists of a scratch race on Saturday, usually into the mountains near Tharwa; allowing the organisers to handicap each rider (vets 50-80 km & ladies 40-50km). This has been followed by a BBQ somewhere. On Sunday, there are graded Criterium races (12-20km for vets & 15km for ladies) run through an industrial estate. The weekend has proved to be splendid in the past, and should be supported by more of us (the Sydney Old Boys (S.O.B'S.))...

Let's plan on a club weekend in Canberra September 27 & 28...

Economical accommodation could be arranged in on-site caravans, if sufficient numbers were to show an interest.....

* Race entries close on 07/09 for this event

GOULBURN - A REMINDER *****

The SUNTOUR Goulburn to Liverpool Classic will be run again this year, with continued sponsorship by Martin Hanley. Members are reminded that entries close on: 17.08.86 at the Union race box. The event starts at 7:45 am from Belmore Park in Goulburn on Sunday, 7 September.



Alice Springs will become the centre stage for the inaugural CENTRAL AUSTRALIAN MASTERS GAMES in October, 1986.

Participating in this unique Masters competition will give you the opportunity to meet others, compete at whatever level you feel able to achieve, have fun and enjoy the contacts, championship and excitement of a festival of sport.

Often referred to as 'veterans' or 'seniors', the Masters are mature sportsmen and women competing in age related groups. Most become masters at 35 for women and 40 for men, although this can vary depending on the sport. Masters may be amateurs or professionals. Some have been international champions, others may become champions in their own right during the Games.

In all 20 sporting events will be held at the Games ranging from the more traditional athletics through to Ten Pin Bowling, Pistol Shooting, Badminton and Hockey. Alice Springs boasts a high standard of sporting venues.

Join in the fun and excitement of the CENTRAL AUSTRALIAN MASTERS GAMES -

PACKAGES AVAILABLE

PROGRAMME OF EVENTS

	Sat 18th	Sun 19th	Mon 20th	Tue 21st	Wed 22nd	Thu 23rd	Fri 24th	Sat 25th
Opening Ceremony	5.30pm	Venue: Traeger Park Complex						
Athletics								
Badminton								
Basketball								
Clay Target Shooting								
Cycling - Roadraces								
Cycling - Trackraces								
Darts								
Golf								
Hockey								
Lawn Bowls								
Netball								
Pistol Shooting								
Rifle Shooting - Big Bore								
Rugby Union								
Sporting Shooters								
Squash								
Super Rules	Days and times to be decided							
Swimming								
Ten Pin Bowling								
Tennis								
Touch Rugby								
Closing Ceremony								5.30pm
	Venue: Traeger Park Complex							

Morning Afternoon All day

CYCLING

Minimum Age: Female 35, Male 35

Road Racing Events

☐ Time Trial ☐ Criterium ☐ Road Race

Velodrome Racing Events

☐ Sprint ☐ Individual Pursuit

☐ Wheel Race ☐ Teams Pursuit

AGE: ☐ Vet 1: (35-44) ☐ Vet 2: (45-54)

☐ Vet 3: (55+)



Athletic Clothing

by Chester R. Kyle

A 50-year-old photograph of an athlete brings sharply to the viewer's eye the change that has taken place in that sport's clothing. A football player wears a skimpy helmet, loose-fitting pants and light padding, a baseball player has on a baggy wool suit and a woman plays tennis in a long skirt. It is evident that little consideration was given to the suitability of the clothing for the sport. Today a good deal of thought goes into the design of clothing for athletes. Indeed, in the speed sports a properly designed outfit can provide the winning margin in a close race. In other sports the right clothing can make a distinct contribution to performance or increase the athlete's protection from injury.

Each sport has distinctive requirements for clothing and equipment. It would be impossible to explore them all here and to describe the improvements that have been made by utilizing new materials and approaching design from an engineering point of view. Instead I shall focus on a few examples: aerodynamic clothing and equipment, the running shoe and the helmet.

Aerodynamic clothing and equipment are of great importance to skiers, speed skaters and cyclists and to athletes who compete in luge and bobsled races. Speeds are high enough in these sports to make wind resistance the major retarding force. Tests in wind tunnels and in the field have shown that a reduction in aerodynamic drag will improve performance.

Aerodynamic drag on the human body can be lowered in three ways. The commonest way is to change the position of the body in relation to the wind. The uncomfortable crouched posture of downhill skiers, speed skaters and cyclists reduces the area of the body facing the wind and makes a more streamlined form. A diver exhibits the ultimate in streamlined posture and low frontal area. This extreme position is not practical in most sports,

although the nearly prone luge sledder approaches it.

The second way of dealing with drag is to design equipment that helps to streamline the body. An example was the helmet worn by members of the U.S. cycling team in the 1984 Olympic Games; it changed the shape of the upper part of the head to resemble the canopy on a jet aircraft.

The third method is to make clothing as smooth and tight as possible to minimize friction arising from contact with the air. That is why tight, smooth, aerodynamic costumes have become standard in the speed sports. The effect is evident in speed skating and cycling because an overall reduction of from 6 to 10 percent in wind drag is possible if the competitor wears aerodynamic rather than conventional clothing.

Beginning in 1982 Paul VanValkenburgh, Joyce S. Kyle (my wife) and my colleagues and I designed and tested clothing, helmets and bicycle components for the U.S. cycling team. We found that at 30 miles per hour on smooth, level pavement wind resistance accounts for about 90 percent of the total drag force on a bicycle. Rolling resistance of the tires and friction on the bearings account for the remaining 10 percent. About two-thirds of the aerodynamic drag force is due to the rider. Thus the greatest chance for gains in speed lies in improving the aerodynamics of the rider. It was this finding that led VanValkenburgh to design the bicycle helmet.

In tests in the low-speed wind tunnel at Texas A&M University we found that our prototype clothing and helmet, compared with the best cycling outfits then available, could lower the overall wind drag by as much as 6 percent. In the 4,000-meter pursuit race the reduction in drag would mean an improvement of as much as three seconds in the record time. Indeed, American cyclists wearing similar clothing have won many medals in international competition.

VanValkenburgh, Peter R. Cavanagh, Jack Lambie and I also worked on streamlined cycling shoes. We calculated that they would take another 1.5 seconds off the 4,000-meter record. Up to now they have not been worn in competition because of difficulties in adapting the shoe to the human foot and the possibility that the shoes may be illegal according to international rules that prohibit most forms of streamlining in standard-bicycle races.

In track and field it had not been shown until recently that clothing affects running speed, even though many workers had pointed out the importance of wind resistance in running. In middle- and long-distance running about 6 percent of the total energy is expended to overcome wind resistance. In Olympic events the maximum running speed ranges from about 12 m.p.h. in the marathon to 27 m.p.h. in the 100-meter dash. Recent wind-tunnel tests I carried out showed that reductions of from 2 to 6 percent in aerodynamic drag are easily achieved by simple changes in the shape a runner presents to the wind.

Loose jerseys and thick or long hair appear to be the primary sources of drag. Even long, rough socks generate 1 percent more drag than bare legs. A tight cap will reduce the wind resistance by about 4 percent. Swapping loose, rough clothes for tight, smooth ones will gain a further reduction of 4 percent.

That reductions in wind resistance will improve running times is hard to verify: the predicted differences in time are small and fall within the area of the variability a runner can exhibit from race to race.

In one case, however, the effect of reduced wind resistance has been demonstrated. In Mexico City, where the altitude is 2,255 meters (7,400 feet), the density of the air is about 20 percent lower than it is at sea level. The wind resistance is therefore about 20 percent lower too. A. J. Ward-Smith of Brunel University in England has shown that sprint speeds are an average of about 1.7 percent higher in Mexico City than they are at sea level.

Employing mathematical models of sprinting and distance running, I have calculated that a drop of 2 percent in wind resistance can significantly change the length of a winner's lead. In a race between runners of equal ability the winner's lead varies from about four inches in the 100-meter dash to more than 30 yards in the marathon. On the international level winning margins are often less because the athletes are very closely matched. An improvement in clothing can easily give a competitive advantage. Tight running costumes similar to those in the other speed sports were introduced recently and are being widely adopted.

Special footwear for running is also a fairly recent development compared with the antiquity of the sport. Formal track and field meets began at Eton in 1837, and the first recorded dual meet was between Oxford and Cambridge universities in 1864. A pair of spiked running shoes from that era is preserved in the Central Museum and Art Gallery in Northampton, England. By 1894 the spiked shoe made of light leather had assumed a form that remained almost unchanged for more than 60 years.

The first shoes for long-distance running had high tops of leather and heels and soles of leather or rubber; they did not differ much from standard walking shoes. Shoes for both distance running

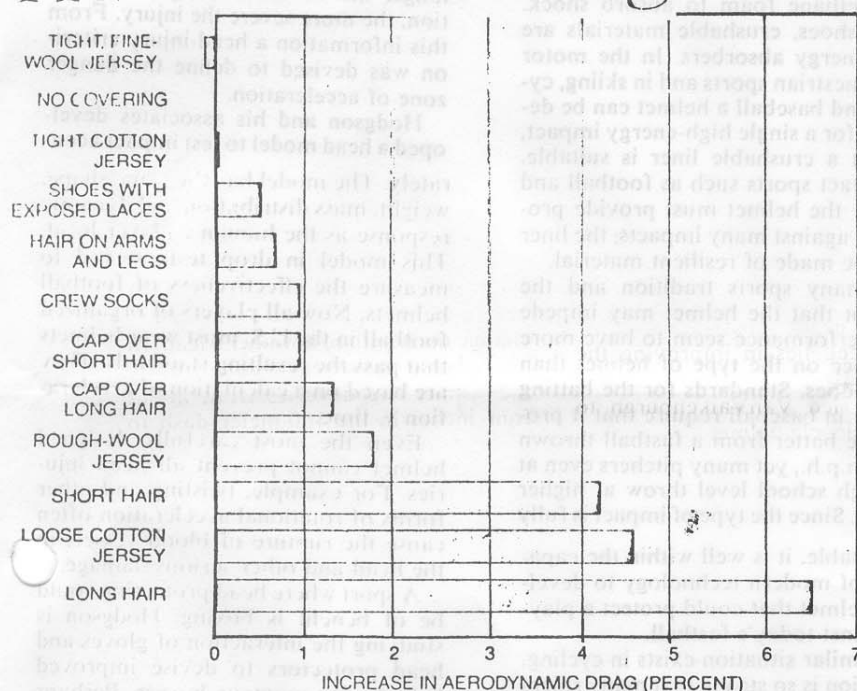
and sprints began to change significantly in the late 1950's, but it was not until the 1970's that competition and new technology brought about a rapid proliferation of new designs.

In large part the radical changes in running shoes result from what has been learned in the past decade about the basic mechanics of running. Experts in biomechanics have employed high-speed photography, video cameras, pressure plates, load cells, devices for measuring oxygen consumption and other instruments to study in detail the important variables in running. The variables include the motions of the feet and legs, the time for each segment of motion, the forces on the runner and the level of energy required by various types of running.

This work has revealed that several critical changes take place as running speed goes up. They include the action of the legs and feet, the forces on them and the metabolic costs of running.

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Athletic Clothing *continued*



AERODYNAMIC EFFECT of various kinds of clothing on a runner is charted. The wool jersey ranks ahead of no covering because it functions like the dimples on a golf ball.

As speed increases, the frequency and the length of the stride increase. So does the flight time: the periods when both feet of a runner are off the ground. A sprinter running flat-out can have both feet off the ground more than half of the time.

As speed increases, the center of pressure of the foot's contact moves forward. Usually someone running slowly begins a foot strike on the rear outside edge of the foot, whereas a sprinter lands on the forward outside edge. Yet about 20 percent of distance runners are forefoot strikers. Cavanagh, one of the pioneers in the detailed study of the running shoe, has ascertained in his work at Pennsylvania State University that the American marathoner Bill Rodgers does not touch the ground with the rear of his foot (when the course is level). He could wear a heelless shoe.

The forces entailed in running become more significant with increasing speed. The velocity at which the foot strikes the ground increases, as does the maximum force of the foot's contact with the ground. The energy lost in the shock of contact also increases. The angle and the rate of flexion of the knees and hips change with higher speeds. This is probably an automatic adjustment made to help absorb the heavier shock without injury.

At higher speeds the foot supinates, or rolls outward, increasingly before striking the ground. After striking the ground the foot pronates, or rolls inward, and the center of pressure moves forward and toward the midline of the foot. Because of the high pressure and force generated, shock absorption be-

comes one of the most important functions of the running shoe. Workers at Nike, Inc., have found that the maximum force on the foot after ground contact is as much as three times the weight of the body and that the acceleration transmitted to the leg can be 10 times greater than normal gravity.

The metabolic cost of running rises linearly with speed. As a result, since the average speed decreases as the distance of the run increases, the energy consumed remains between 70 and 90 kilocalories per kilometer.

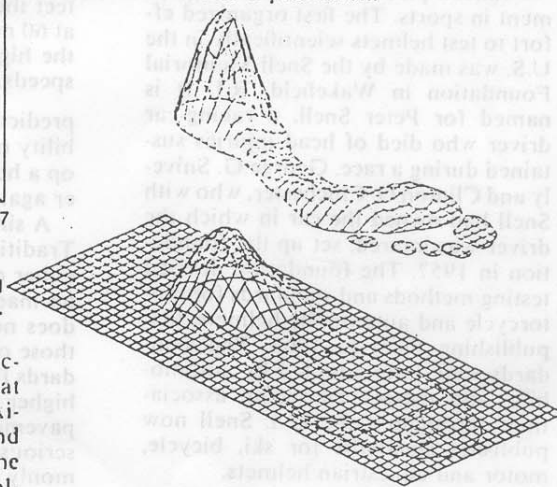
These findings and additional ones have given rise to a variety of track and running shoes. A sprinting shoe is extremely light and has fine spikes. They are necessary because the traction force needed by a sprinter approaches the weight of his body. (In distance running the typical traction force is about 40 percent of the body weight, so that spikes are not necessary.) The spikes are designed to minimize energy losses while damaging the running surface as little as possible. Since a sprinter lands on the outside of the foot, traction ridges are placed on the side of the shoe to prevent slipping. The high-jump shoe has spikes on the takeoff foot; they are positioned according to the athlete's jumping style. The opposite shoe is much lighter and has no spikes.

The modern shoe for distance running has several features to reduce injury and increase performance. It has a midsole made of expanded foam to absorb shocks. The raised heel wedge is designed to reduce stress on the Achilles tendon, thereby preventing tendinitis there. The flare of the

sole, the stiff heel counter and the variable hardness of the sole material all help to control excess motion of the foot after it touches the ground.

Some of these components are still fairly soft. Soft materials allow the foot to shift and to pronate excessively. This kind of movement is thought to be the cause of some knee injuries. Consequently much of the current ef-

fort in the design of running shoes is aimed at controlling excessive pronation. The hardness of the outsole and the pattern of the tread can be designed to keep the foot from rolling inward. Moreover, the inner part of the heel wedge can be made harder than the outer part. This feature and the arch-supporting inner liner serve together to control excessive pronation.



The bottom of the shoe is made of a harder and more durable material than the midsole. It can be specifically designed for traction, flexibility, long life, foot control, shock absorption and several other requirements. Inside the shoe a soft, flexible inner liner is shaped to give support to the arch—a feature that was once incorporated only in orthopedic running shoes.

The upper part of a running shoe serves no purpose except to hold the sole on the foot. If it were possible to attach the sole to the foot with a non-irritating adhesive, the upper could be eliminated. Such a bizarre shoe, however, would probably last for only one race and might cause injuries.

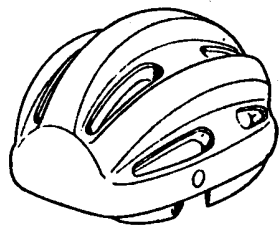
The upper, which usually accounts for about 30 percent of the typical run-

ning shoe's weight of nine ounces, is designed to be as light as possible. It must provide adequate ventilation and endure constant pounding and abrasion. The typical upper made of nylon mesh and a composite material serves the purpose well.

In seeking to improve running shoes technologists are looking for lightweight materials that absorb shocks adequately. Lighter shoes in general mean a lower expenditure of energy by the runner. Measuring submaximal oxygen consumption of runners, Edward C. Frederick and Jack Daniels of Nike have found that each one-

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ounce reduction in the weight of a single shoe causes a decrease of .28 percent in the energy required for running. They also found, however, that cushioning affects energy consumption. Paradoxically, a light shoe that has improper cushioning will raise the energy requirement.



The helmet is probably the most advanced piece of protective equipment in sports. The first organized effort to test helmets scientifically in the U.S. was made by the Snell Memorial Foundation in Wakefield, R.I. It is named for Peter Snell, a racing-car driver who died of head injuries sustained during a race. George G. Snively and Clinton O. Chichester, who with Snell had owned the car in which the driver was injured, set up the foundation in 1957. The foundation devised testing methods and standards for motorcycle and automobile helmets, first publishing them in 1966. The standards were later adopted by automobile- and motorcycle-racing associations throughout the U.S. Snell now publishes standards for ski, bicycle, motor and equestrian helmets.

One standard test ascertains how much a helmet absorbs a blow to the head. In the test the helmet is mounted on a head form, which is then dropped from a height of about three meters onto a flat or hemispherical anvil. An accelerometer mounted at the center of gravity of the assembly measures the peak negative acceleration (deceleration) of the head form on impact. Work in physiology has established that concussion and other compressive injuries to the head will be minimized if the measured peak instantaneous deceleration is less than 300 g (300 times normal gravity). The Snell standard for allowable peak deceleration is 285 g; most automobile and motorcycle helmets will keep deceleration below that. Moreover, because the metal head form is not a replica of the more compliant human head, the peak decelerations seen in the Snell tests probably represent actual decelerations to a human head of less than 200 g.

A helmet is inadequate if it does not stay on the head and if it can be broken or punctured. Additional tests therefore measure the strength of the chin strap and the ability of the helmet's outer shell to resist penetration by a sharp object. Usually the outer shell is made of fiberglass or injection-molded plastic. Fiberglass is the stronger and more durable of the two materials.

Most modern helmets for the motor sports have a crushable expanded-polystyrene liner or a flexible or rigid polyurethane foam to absorb shock. As in shoes, crushable materials are ideal energy absorbers. In the motor and equestrian sports and in skiing, cycling and baseball a helmet can be designed for a single high-energy impact, so that a crushable liner is suitable. In contact sports such as football and hockey the helmet must provide protection against many impacts; the liner must be made of resilient material.

In many sports tradition and the thought that the helmet may impede high performance seem to have more influence on the type of helmet than safety does. Standards for the batting helmet in baseball require that it protect the batter from a fastball thrown at 60 m.p.h., yet many pitchers even at the high school level throw at higher speeds. Since the type of impact is fully

predictable, it is well within the capability of modern technology to develop a helmet that could protect a player against today's fastball.

A similar situation exists in cycling. Tradition is so strong that many riders either do not wear a helmet or put on an inadequate leather "hair net" that does not meet the Snell standards or those of the American National Standards Institute. Since racing speeds are higher than 25 m.p.h., contact with the pavement in a crash can cause death or serious injury. A test in which a commonly used leather helmet is exposed to a two-meter drop onto a flat anvil suggests that the head of a cyclist wearing the gear could be exposed to an impact shock greater than 700 g. Several manufacturers produce bicycle helmets that give far better protection: their products hold the impact shock in the same test to between 170 and 270 g.

Head protection in football has been the subject of study over the past 15 years by Voigt R. Hodgson of the Wayne State University School of Medicine and his colleagues. Their work led to the publication of standards in 1973 by the National Operating Committee on Standards for Athletic Equipment. Somewhat later, rule changes prohibited initial contact with the head in blocking and tackling. Since these two events the number of skull fractures, concussions, paralyzing neck injuries and other serious head injuries in football has declined by more than 50 percent.

Studies at Wayne State and elsewhere have made use of cadavers to measure the severity of impact required to fracture the skull or cause neck injuries. In later tests pressured dye in the cranial arteries of cadavers showed how blood vessels rupture when the head receives a blow. The tests revealed that a wide range of shock intensity led to head injury; the differences arose from differences in bone strength and vascular condition.

Most of the serious head injuries did not occur until peak accelerations of from 100 to 200 g were reached. The longer the duration of high acceleration, the more severe the injury. From this information a head-injury criterion was devised to define the danger zone of acceleration.

Hodgson and his associates developed a head model to test impact accu-

ately. The model has the same shape, weight, mass distribution and dynamic response as the human calvarial head. This model in drop tests served to measure the effectiveness of football helmets. Now all players of organized football in the U.S. must wear helmets that pass the resulting standards. They are based on a calculation of acceleration v. time.

Even the most carefully designed helmet cannot prevent all head injuries. For example, twisting and other forms of rotational acceleration often cause the rupture of blood vessels in the head and other serious damage.

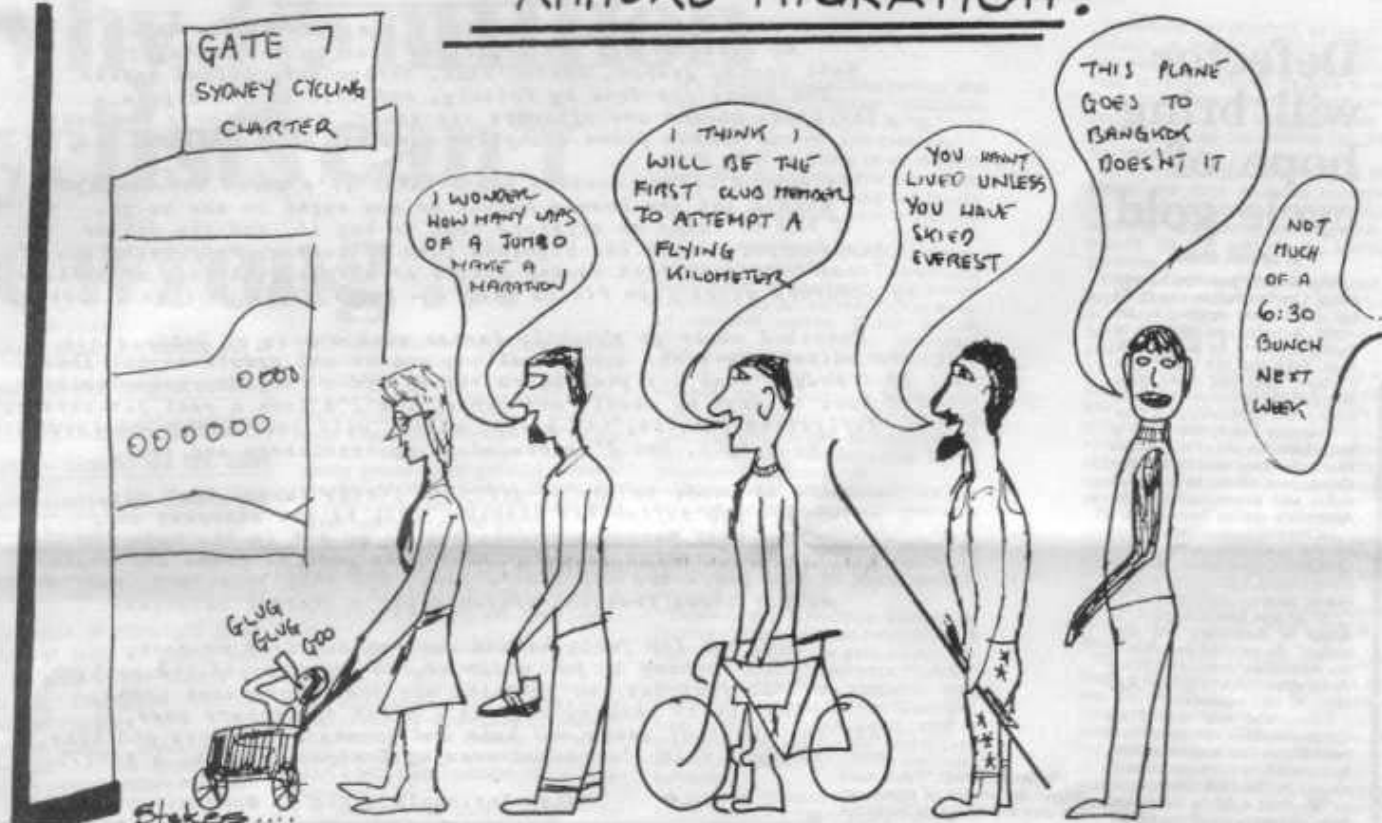
A sport where head protection could be of benefit is boxing. Hodgson is studying the interaction of gloves and head protectors to devise improved helmets for amateur boxers. Perhaps boxing may someday resemble fencing in that a potentially deadly sport is made safe and winning or losing is judged solely on technique and points.

Unfortunately athletes are often reluctant to wear protective gear because of the weight and discomfort or because they assume that its use reflects adversely on their physical courage. Objections to weight and discomfort could be overcome by reducing the weight of protective gear. For example, a goalie in hockey could move faster and make more saves if he wore light padding that gave as much protection as the equipment that is now standard. This is an area that would benefit from further research.

Several major forces are promoting rapid change in sports equipment. The first one is money. The industry making and selling sports and athletic apparel in the U.S. has annual sales that approach \$4 billion. Sporting-goods firms compete briskly to sign professional and amateur athletes to contracts binding them to the exclusive use of certain products. The idea is that winning athletes will help the sales of the equipment they use. This strategy creates intense pressure to improve equipment to give sponsored athletes an advantage over their competitors.

Another force for change comes from governments and national athletic organizations, which believe their reputations can be enhanced by victories in international competition. Finally, coaches and athletes constantly call for better equipment. In combination these forces have made technology an increasingly visible and important partner in the design of athletic clothing and equipment.

ANNUAL MIGRATION!



We've had a season of true "Seven Leagues Boots" recently, with several members just returned from some rather exotic adventures overseas.

Rosemary Peerenboom and Paul Montesin trekked through the high Himalaya, Kash mir and other parts of the Asian sub-continent. Apparently a highly recommended experience, although India left them less than fulfilled...

John Beauchamp returned from an 'extended' annual leave in Thailand. Just what is the basis of that knowing smile???

Walter Rolli really globe trotted, by visiting family in Switzerland; and then joining some old riding mates for a 2400 km jaunt through Sicily. They drove to Genoa and took a ferry to Palermo. Rode around the island, and met up with the Giro d'Italia on two occasions.

Andy, Ros and Amy Doldissen took the casual approach, spending a leisurely time in the Greek Isles, and then on to England and a drive through the Cotswolds before winging it back home.

Mark Bonwick continues his endeavours to become 'Australia's Deepest Man'. He has been on two expeditions to Mexico, exploring caves in the remote central table lands. The expedition has been written up in several journals (soon in National Geographic) and plans are underway for another expedition to attempt to set some new records...

Mark was recently involved in an expedition to the Arthur's Pass district of N.Z. where the 'longest' caving journey was undertaken....

!!! Some of us stay home and participate in Club Rides !!!

SATURDAY MORNING RIDE

Do you remember the 'good old days' when the large bunch rode around Centennial Park discussing the problems of the world, and those of the Club? Although the bunch has dwindled, the problem solving ride continues. Not all rides are meant to be 'training' excursions, and the Saturday morning ride caters to those members who want to have a good, general discussion and hopefully contribute to the directions the Club should take in the immediate future.

Riders meet at the Park kiosk at 6:30 AM on Saturday mornings for a leisurely ride to Watson's Bay. This provides a good, brisk ride and allows everyone to contribute to the necessary 'problem solving' within the Club. Many of the major world problems are discussed (and resolved) as well.....

While on the subject of Club Rides, it is pleasing to see that a growing number of members are coming back into the Park for the 'morning sessions'. Just about any weekday morning will see a bunch of about six or so members riding together....

Sunday mornings usually sees some of the club members ride off with the 'Waterfall Bunch', although they then tend to go into the Royal Park for a return ride through Audley; or on occasion to Stanwell Park. This group leaves at 6:30 am; while another group leave at a slightly less hectic pace at 7:00 am for a ride to Cronulla or Sutherland; while another group leave at about 7:15 from the York Rd gates for a ride to La Perouse.

Idle hands ...



SOME people seem unable to resist the temptation to alter road signs. This sign on the Lismore - Bangalow Road near the Boatharbour bridge once said 'Reduce Speed' until it was carefully altered, even down to the exclamation mark. Now it will distract drivers and could easily cause an accident.

Defector will bring hope of cycle gold

Dr. S. OLIVEIRA COSTA

After illegally pedalling his way out of Czechoslovakia, one of the top 10 amateur cyclists in the world is trying to emigrate to Australia, where he is tipped to reap gold for the Australian Olympic team and make more than \$20,000 in competition prize money and sponsorships a year.

Kvetoslav Palov, who at 23 is being hailed as one of the Eastern Bloc's champion road cyclists, has already been offered a job, a plane ticket and accommodation by Australia's cycling fraternity.

He has also been offered a place on the Australian team in the \$500,000 Commonwealth Bank Cycle Classic, billed as the world's richest amateur cycling race.

"If he was here tomorrow, he would be Australia's best road cyclist," the national president of the Australian Amateur Cycling Federation (AACF), Mr. Ray Godkin, said yesterday.

Palov, who was one of the Czechoslovakian Olympic team barred from Los Angeles in 1984, is expected to take our team to victory in the 1988 Olympics.

"We have a lot to learn from him," the manager of the Australian cycling team, Mr Jock Bullen, said from Buttgen, West Germany yesterday, where the team is training for the Commonwealth Games.

The young Czech defector, one of the top three cyclists in his native country, is expected to be here and working as a bicycle mechanic by Christmas almost two years after he first became friends with the Australian cycling team.

Three weeks ago Falov was competing in Vienna when he and team mate, Vladimir Dolic, escaped on their bikes to West Germany.

Palov has been granted political asylum and has lodged an application to emigrate to Australia. He has been perfecting his Australian accent at Buitzen.

Dolic has decided to settle in West Germany.

Mr. Godkin said: "Palov can't believe the amount of money we can earn and he is very frustrated at the number of times he has wanted to go to a race and has not been allowed."

"He came fifth in the Milk Tour of Britain shortly after we met him, the biggest amateur race in the world. That won him 3,000 pounds but he was only allowed to keep 30."

Department of Immigration officials yesterday confirmed that Paloy's chances of emigrating "are

Czechoslovakia has lost several champion hockey, soccer and tennis players to the West in recent years.

The Czechoslovakian Vice-Consul, Mr. Karel Janout, said yesterday Czechoslovakia's training facilities, sponsorships and prize money were equal if not better than those offered elsewhere.

I take my cycling seriously, I want you all to know, My bike has all the top class gear by Mr. Colnago; Full Campag gruppo, Spenco seat, chrome-moly butted spokes, The paint job done by Whitely, and this is not a joke - The brake blocks are of space age stuff, to dissipate the heat and carbon fibre toe clips make the bike complete.

It cost a bloody fortune but I think it's worth the dough;
When I get the breeze behind me you ought to see me go.
I had to raise an offshore loan to buy it, and the dollar
has dropped so far the payments seem to keep my coffers hollow,
so I can't afford flash racing knicks or shirts with lots of pockets;
my wardrobe comes from Vin de Paul's - but I still go like a pocket.

Though I might go slightly faster with a pair of Detto shoes and white silk socks - I'll sell my cranks and pedals to but those. If I bought some hot pink lycra tights and a Peugeot racing sweater I'd have to pawn my wheels and tyres, but I'd look a real jet-setter. Reflective sunnies, net-backed mitts, will just about complete my outfit, but I've traded in my handlebars and seat.

All it needs to top it off is a little turned back cap, with a few reflective patches, I'll be the sharpest chap who ever turned a pedal; but to go out in the rain I'll need a Gore-Tex jacket - that just cost me frame and chain. Now brakes and gears are all that's left, and they'll take me no further, so for those freezing winter days, a thermal balaclava.

Well now I'm fully kitted out for daylight or dark,
but I've nothing to put under me, to ride around the park,
so I'll just sit and take the sun upon Centennial grass,
try not to show my envy as I watch the others pass,
talk knowingly of gears and hubs and cranks and frames and like,
and one day, when I've saved enough, I might even buy a bike...

Alex Springall - via A. Hamrovič

*** EXPENSIVE TRAINING ***

BRIAN BAGSTER, AN A-GRADE ROADMAN FROM TAMWORTH WAS RECENTLY STOPPED BY A POLICE PATROL AND BOOKED FOR "DANGEROUS RIDING". BRIAN WAS 'DRAFTING' BEHIND A MATE'S CAR, WHILE ON A TRAINING RIDE WHEN THE BREACH WAS MADE. THE LOCAL MAGISTRATE FINED BAGSTER \$75.00, AND SUGGESTED THAT HE SHOULD SET A BETTER EXAMPLE FOR YOUNGSTERS IN THE AREA....

FAREWELL TO WHEELS

An article published recently in Time Magazine "Chic Duds on Two Wheels" reported on the latest trends in cycling a la USA. Up to now it would have been true to say that we usually followed the overseas trends, albeit a few months or years behind; now I'm not so sure anymore... It is reported that 'bicycle riding in America no longer means throwing on dungaree cutoffs and a T-shirt and hitting the road on a scuffed up ten speed. More and more cyclists are plunking down big money for flashy, funky uniforms that hug the figure and such accessories as helmets, shoes and kneepads.'

DRESSED TO IMPRESS

Women's tri-suit \$64

Men's cycling jersey \$55

Men's tri-suit \$75

Men's racing glove \$27.95

Men's baseball cap \$4.95

Women's canvas shoe \$78.95

Men's competition shoe \$64.95

LIVING OUT

So what's new? I have no doubt whatever, that these ideas were stolen, through covert operations, by that famous agency that specialises in such enterprises. All you have to do is get up early enough, select an inconspicuous observation post and then observe the Sunday morning parade at the Centennial Park Kiosk, admittedly, the locals would fit better into a Footrot Flats crowd than the sleeker, Marvel Comics favoured by the Yanks, but it is the idea that counts, not the substance and so I'm certain that it has been filched... As with all good ideas, the Yanks with their legendary ingenuity 'can do' attitude - have improved upon it and shaped it into a sleek, commercial money making machine. For example: all that finery comes from "boutiques more than bike shops, with dressing rooms, mirrors, carpeted floors and female personnel to assist women customers feel as if they are buying Haute Couture rather than sporting goods", or attending their annual convention, industry 'executives' and 'dealers' (bikeshoe owners please note) "kicked off not with a display of bikes, but with a fashion show of cycling togs modeled by the Los Angeles Rams cheerleaders". And if this was not enough razamataz, then listen to this brilliant idea.

"Some stores, deciding that clothes make the cyclist, have dispensed with stocking bikes altogether"!!!
Sadly, it seems to me that we are coming around a full circle to the time before the wheel was invented - all dressed up and nowhere to go... Should such ideas boomerang, and I have no doubt that they will, then the few remaining diehards with their crusty nicks (ladies exempted) and battered old ten speeds will hang their wheels in shame and cry.

Tony Hamrozi

Why 3.5 million cyclists can't be wrong ...

THE WEEKEND AUSTRALIAN MAGAZINE

April 26-27 1986

● **Keep-fit freaks are coming out of the gyms and into the great outdoors as they discover something kids knew all along — bicycles are fun. JANE CADZOW reports on the boom in two-wheeled transport.**

IT is made of ultra-light steel alloy, has at least 10 gears, and comes in such exotic shades as Champagne, Cinnamon, Ferrari Red and Adriatic Blue.

Unlike its distant ancestor, the humble pushbike, the cycling machine of the 1980s combines high-efficiency performance and high-tech pizzazz. Bike-riding, once widely dismissed as greasy kidstuff, has definitely come into its own.

Some 3.5 million Australians, a third of them adults, own and use bicycles. Of these, more than two million ride a bike at least once a week.

Adults, like children, ride mainly for recreation, but bikes are used increasingly for getting from A to B. In Melbourne, as many people travel to work by bicycle as by tram. In Sydney, despite the most hair-raising cycling conditions of any Australian city, more people travel to work by bike than by ferry. On weekends in Sydney, the use of bikes exceeds that of trains and ferries combined.

But the leaders in the cycling stakes are the cities of Adelaide, Perth and Townsville, in each of which 5 per cent of all trips to work are made by bike.

Dr John Mathieson, president of the Bicycle Federation of Australia, says the overall increase in bike use is largely a result of the growing enthusiasm of adults for the sport. Children have long been dedicated bike riders, but Dr Mathieson says "usage by adults seems to be growing tremendously." At present some 23 per cent of riders are aged 20 to 39 years, and 10 per cent are aged 40 and over.

"In the past," says Warren Salomon, publisher of *Freewheeling* magazine, "bicycles were the transport for poor people. Nowadays it's very much a recreational activity for the middle-class."

How best to describe the new breed of cyclist? "I suppose you could say your classic yuppie," Salomon says. "My impression of the new bike rider is that they're well-educated, reasonably well-off, and looking for something that's going to combine fitness with a better appreciation of the environment."

"I wouldn't say they're rabid environmentalists," he adds. "If anything they tend to be politically conservative."

Though cycling need not be an expensive pastime, it offers plenty of opportunity for income disposal. The biggest-selling adult bikes are in the \$200 to \$300 range, but according to John Carroll, managing director of the Apollo Bicycle Co, there is a substantial and growing demand for those priced at \$500 and more.

Most local manufacturers long ago gave up the battle to compete with overseas products, and now almost all bikes sold in Australia are imported from Europe, Japan and Taiwan. The most expensive are the French racing brands — the Gitane, for example, which has won seven of the last 10 Tour de France championships, starts at \$450 and can cost up to \$1700.

It's not only competitive cyclists who want high-performance machines. John Carroll says there is "a lot of mystique" involved, and even recreational riders planning to do nothing more dramatic than tootle around the block are happily shelling out for the latest in whizzbang bicycle technology.

But the bike itself is only the beginning. *Freewheeling*, a bi-monthly publication, is crammed with advertisements for an extraordinary array of optional extras. These include sheepskin seat covers, handlebar pads, racing chains (*Izumi Chains* — A Touch of Class), automatic chain cleaners, racks, panniers, brakeshoes (*Scott/Matthäuser* — The Thinking Cyclist's Brakeshoe), fairings (which are rather like windscreens), lights, puncture-resistant tyres...

(Bicycle locks, the stronger the better, are the most essential accessory of all. A report produced for the Victorian State Bicycle Committee late in 1985 said some \$30 million worth of bikes were stolen in Australia each year.)

There is also a thriving market for cycling clothes, because naturally it is important to look the part. Smart riders sport form-fitting lycra "knicks" (no one calls them knickers) with brilliantly coloured jerseys. They also wear special cycling shoes, cycling gloves, cycling sunglasses, and if they are at all sensible, impact-resistant helmets.

A growing number of cyclists, loathe to waste all this fancy equipment and sartorial splendour on the suburbs, are expanding their horizons with cross-country touring. (See calendar.) In last year's Great Victorian Bike Ride, Australia's biggest annual long-distance event, more than 2000 people spent nine days riding the 600km from Wadonga to Melbourne.

For those who prefer to set off on their own, Bicycle Australia has prepared trail guides for favoured destinations. In summer these include the Snowy Mountains (!) and Tasmania. In winter, cyclists head for north Queensland, and the quiet roads of rural Victoria are popular year-round.

Tailwinds Bicycle Touring, a Canberra travel agency, arranges holidays for those heading further afield. China is their number one destination, but there is also demand for cycle tours in Japan, the US, Europe, India, Malaysia and New Zealand.

The longing for the wide open spaces has given birth to the hottest new product on the cycling scene. "Mountain bikes", also known as all-terrain bikes, have fat tyres, low-speed gears and wide handlebars. Aimed primarily at the adult market, they are designed for comfortable travelling on rough surfaces and slopes, and sell for \$300 to \$900.

"It's probably the first time ever that we have a bicycle that's ideally suited for Australian conditions," Warren Salomon says. "We have a large percentage of unsealed roads that are in very pretty countryside." And as so many central city streets are potted and uneven, "it's also an ideal urban bike".

In central city districts, as the proliferation of bicycle courier companies has shown, the biggest single advantage is speed. Travel by bike is door-to-door — there is no sitting around in traffic jams, no long searches for parking places, no waiting for public transport.

Next week, April 30-May 2, in Newcastle, the first national conference on bicycle safety will be held. Sponsored by the Federal Government, Bikesafe '86 will address an alarming problem.

Eighty-four cyclists were killed on Australian roads last year (26 of them in Victoria, 23 in NSW, 21 in Queensland, 6 in SA, 4 in WA, 2 in the Northern Territory and 2 in the ACT). In 1984, 90 were killed. Over the past 10 years, about 4 per cent of all reported road casualties have been cyclists. For children, especially male children, the risk is higher. Of all under 16-year-olds killed on the roads, one in six are cyclists — and of these, more than 80 per cent are boys.

Dr Mathieson of the Bicycle Federation says the official figures fail to convey the full extent of the problem because they do not include the many unreported cycling injuries. He estimates the number of cyclists hospitalised in 1984 at about 7000 — five times the official figure.

Dr Mathieson, a physical chemist from Newcastle, says the blame does not lie primarily with motorists, as tends to be assumed, but with the cyclists themselves. Too many bike riders habitually ignore road rules, and in about two-thirds of accidents involving bicycles and cars, cyclists are found to be legally at fault. Among the most common infringements are riding through stop signs and red lights, riding at night without lights and riding on the wrong side of the road.

But by far the biggest cause of injury is lack of skill and experience. In a five-year study in the Australian Capital Territory, 80 per cent of all hospitalised cyclists received their injuries in accidents in which no other vehicle was involved. "People falling off their bicycles," Dr Mathieson says bluntly.

The Bicycle Federation has welcomed the introduction in some Victorian and NSW primary schools of a "Bike Ed" course, usually taught in Year Five, in which the emphasis is on road safety and the development of riding skills. The course is beginning to be taken up in other States.

Last year the Footscray Institute of Technology, backed by the Victorian government, offered the country's first adult education classes in urban riding skills. The Victorian Government has also led the way in campaigning for increased use of safety helmets.

Alan Parker, president of the Bicycle Institute of Victoria, would like more towns and cities to introduce "bike plans" (networks of cycle routes linking recommended roadways with off-road bike paths) such as those that exist for Melbourne, Adelaide, Perth, Geelong, Townsville and Newcastle.

Parker is also campaigning for Australia to follow the Californian example and admit cyclists to at least some urban freeways, on which they would ride in the wide safety lanes.



Ready to ride: Warren Salomon shows what the dedicated cyclist needs.

Touring calendar

- September 13: Strezlecki Ranges 300km ride. From Dandenong to Wonthaggi and return. Contact Audax Club.
- Sept 13-21: Hawker to Adelaide 600km ride. Contact SA Touring Cyclists Association.
- Oct 4-6: Hunter Valley 190km 'Four Rivers Ride'. Contact Bicycle Australia.
- Oct 27-Nov 12: Geelong to Adelaide 'Southern Ocean Tour'. Contact Bicycle Australia.
- November 22: Lilydale to Mt Buller. Contact Audax Club.
- November 23: Sydney to Wollongong 85km ride. Contact Freewheeling magazine (02) 264 8544.
- November 29-December 7: The Great Victorian Bike Ride. 500km Bairnsdale to Melbourne. Contact Graham Rebbek (059) 786 000.
- December 6: 400km Canberra to Yass, Cowra, Young and return. Contact Audax Club.
- December 13: 300km Melbourne to Daylesford and return. Contact Audax Club.

THESE clubs organise regular cycling events: Audax Australia (03) 435 4137, (02) 608 1125, (062) 47 3137; Bicycle Australia, PO Box K499, Haymarket, NSW; Bicycle Institute of NSW (02) 212 5628; Brisbane Bicycle Touring Association (07) 369 9326; Canberra Pedal Power (062) 48 7995; Cycle Touring Association of West Australia (09) 330 3659. Geelong Bicycle Touring Club (052) 96 234; Melbourne Bicycle Touring Club (03) 836 0440; Newcastle Cycleways Movement (049) 46 8298; South Australian Touring Cyclists Association (08) 278 5235; Tandem Club of Australia (03) 241 4453.

Sundowner

A last minute handicap reshuffle made all the difference to cyclist, Brad Bouquet, the winner of the 1986 Coonabarabran to Gunnedah Sundowner on Saturday.

The Eastern Suburbs rider, a late entry for the 107 km event, was originally given off 18 minutes by the local handicapper, but nearing post time, Cycling Union handicapper adjusted Bouquet's handicap to 23 minutes.

Had the 24-year-old cyclist gone off the original 18 minutes, then there is little doubt that the tenacious 17-year-old old, David Sadlier, would have won the prestigious event.

Placings and trophy winners for the 1986 Sundowner were:

B. Bouquet (Eastern Suburbs - 23 minutes) 1, D. Sadlier (Tamworth - 23 minutes) 2, J. Papac (Illawarra - 23 minutes) 3, R. Dwyer (Inverell - 23 minutes) 4, K. Hocking (Tamworth - 23 minutes) 5, G. Law (Parramatta Holroyd - scratch).

Fastest time: G. Law - 2.25.24 (race record). Second fastest time: B. Bagster (Tamworth).

Sprints: King of the Mountain front, T. Tobin. Back, S. Sunderland.

Hunter Valley cyclist Norm Brown was first to cross the line in the Gunnedah to Tamworth cycle race on Sunday.

Brown finished well back in the Sundowner but made up for it on Sunday by a decisive victory in the shorter event.

The rides had started out at a gentle pace so everyone could warm up, then gradually picked up momentum, sometimes dropping a rider or two on a climb, then pausing so the stragglers could catch. When strong but undisciplined young men surged off the front, the group let them go. Soon they learned that peer approval came from the quiet display of riding skills, not head-down, big-gear hammering.

During the rides, these group values were clear, but they were difficult to talk about off the bike. Questions about whether the harder solo effort isn't after all the better workout, or about rides going the speed of the slowest participant, or about guys simply feeling extra good on a certain day - questions like those were hard to answer.

A new rider could go to the bike shop and get answers to all sorts of riding questions. He could find out how long the chain should be

on a derailleur bicycle, how to wash wool clothing and how to join a bike club. Someone knowledgeable could even tell him about pedal cadence and position. The customer could become technically sophisticated by asking questions at the counter, but he would still not have a clue about going around downhill corners elbow-to-elbow in a bunch.

At the chaotic time I mentioned, our looked-up-to riders were temporarily absent. One had quit riding to work on his new house and another was racing in the North. The training rides quickly deteriorated. A rider or two would slip through a light just before it turned red, look back and see the distance "gained", and try to stay away.

If one or two guys from the pack gave chase and two or three more chased them, that was usually enough to string out the whole group and ruin the ride. The people who were uninterested in chasing or not yet warmed up felt discouraged at the sudden disappearance of their training ride. The escapees rode hard but raggedly and learned nothing. The chasers who caught, caught nothing, and the ones who didn't gave up in oxygen debt and disgust.

The clubrun

There was a time when our clubruns lost cohesion, when they routinely turned into ragged burn-ups. No one liked or benefitted from this kind of disorder, even those who were regularly dropping the rest of the group. It seemed that when we had two or three cycling "elder statesmen" in our group the rides stuck together better, out of respect for them, I guess. Most people thought these men knew how to do it, so riders would follow their example and form double pace lines where there was enough room or single, disciplined lines where there wasn't.

Numbers at the start of the runs began to dwindle. People began to speak disparagingly of "the ride." Separate smaller groups sprung up, leaving 15 minutes earlier or later or covering the ride-route backwards. I heard the grumbling and saw the rides, which had gone on for years, falling apart. I caught Bob right after closing at the shop. He nodded his head as I told him about our trouble as if it were not the first time he had heard such a story. He said he'd do what he could.

The next morning Bob was there in front of the shop for the ride. He counted the guys; there were only six. "Six," Bob said. "We start with six; we finish with six."

The ride was a dream. We rode in a double line for most of it, rolling at the most even pace imaginable. Two men rolled off the back in separate incidents, both on long uphill grades. Bob went back and picked up each one and towed him back to the group. Bob was clearly stronger than any other man on the ride, but he used his strength to hold the ride together, not tear it apart.

The following day was better yet. One man brought his friend who had given up coming out for our ride, so we had seven. Bob counted, but said nothing. The seven finished together.

The friend at one point was badly dropped on a climb. Bob rolled back to him and pushed him back to the pack with a hand on the man's saddle. This fellow had never been the recipient of that kind of help before and he was raving about Bob and about how that was the first time he'd finished a training ride with the bunch.

This guy's gratitude and amazement touched me; I thought about how, in any sport with team effort, the solo "hero" effort impresses the observer who has limited knowledge or experience in that sport, but the true aficionado prizes the unselfish labour of the team player, the athlete whose "good day" brings everyone up.

It took several days for word to get around about our remodelled rides; numbers grew rapidly as we regained training drop-outs and added first-times. Bob spent most of his time with the new riders, explaining about smooth lines in corners and warning about slipping wheels. He still went back to tow dropped riders back up but he had to do that less and less as other fit training veterans began to do it without command or comment.

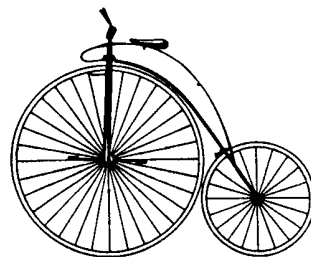
One day a week we did group interval training. Another day we would sprint for town signs, then immediately reform into our accustomed double pace line, elbow-to-elbow, six-inch gaps, friends.

Bob, who preferred to ride after he closed the shop in the evening or early in the morning, trained with us for a couple of weeks until he was sure the discipline had "taken." When our top rider returned from his campaign in the North he dropped right into our training routine with evident pleasure. He complained, on his second day home, that some of the places he had stayed had crummy rides.

"It was every man for himself," he said. "Nothing like this."

by Maynard Hershon

Winning



Police on the trail of errant cyclists

The Sydney Morning Herald Tues May 13 1986

Cyclists have been warned to learn their road rules. The 12 members of the new Bicycle Liaison Police - one each for the 10 Sydney metropolitan police districts and Wollongong and Newcastle - are on their trail.

Police say bicycle couriers are a particular target because they disobey "every traffic law in the book".

Even tots on their dinkies will not be immune. Each time a cyclist commits an offence, he or she is given a ticket. If checks show the cyclist has already received two or more tickets, the police will take further action.

Constable John Boyling, the bikes officer for Central, has spent the first two weeks of his new job visiting nurseries and schools, telling children about road laws. Next week, he will be out on his motorcycle looking for offenders around central Sydney.

"We are not interested in getting money from these kids," he said. "We are interested in making cycling safer."

"If a cyclist is over 16, we will fine them. If they are younger, we are only interested in giving their parents a chance to talk to them about road safety."

The State co-ordinator of the program, Sergeant Ron Blackman, said yesterday the two-week-old campaign was aimed primarily at education. But he said: "We want the kids to know we are going to get tough on cyclists."

More than 100,000 Australians are injured each year on bicycles, according to the Bicycle Federation of Australia. Of these, about 100 are killed (23 last year in NSW) and 7,000 seriously injured.

The president of the federation, Dr John Mathieson, said that official police statistics grossly underestimated the "bicycle trauma".

"While cyclist fatalities are roughly of the order we might expect in comparison with motor vehicles, those hospitalised represent approximately 11 to 15 per cent of all hospitalised from vehicular crashes," he said.

"Australian cyclists have poor levels of compliance with road laws and more than half of the cyclist hospitalisations resulting from motor vehicle/bicycle collisions can be attributed to cyclists breaking the law," he said.

AUSTRALIAN DEATH RATE CLIMBS

