AN ENVIRONMENTAL REVIEW OF THE 1979 AVON DESCENT

C. J. MURRAY

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DEPARTMENT OF
CONSERVATION & ENVIRONMENT
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13 Cars and spectators at Posselt's Ford. The vehicles were banked up trying to enter the quarry, still several kilometres downstream.

14 Power boat negotiates rapids below Posselt's Ford.

15 Canoes drawn up in the clearing at the Quarry on Saturday. The vegetation has been pushed to the side.

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Fig.

16 Following overnight rain, the clearing on Sunday morning was slippery and deep wheel ruts from the bulldozer collected water. Rubbish is evident in the foreground.

17 An early start on Sunday morning for the competitors, with spectators crowding the river bank.

18 Emu Falls, below the quarry, with a camper's fire burning in the background.

19 Competitors and campers at a hazard upstream of Walyunga National Park.

20 Crowded car park at Walyunga Pool.

21 & 22 Two different methods of negotiating Bell's rapids, downstream of Walyunga National Park.

23 The helicopter hovers very low above a canoe, with a cameraman sitting in the doorway.

24 Aftermath. Rubbish lies in the bush at the quarry some 10 days after the race.

1. INTRODUCTION

Two organised boat races are currently held on rivers in Western Australia, the Blackwood Classic 250 and the Avon Descent. In addition, another race was suggested for the Murray River last year but this proposal lapsed.

The Avon Descent has been conducted as a two day event since its inception in 1973, with competitions commencing at Northam and finishing at Perth, a distance of some 145 km. (Fig. 1.)

Channel 9 and the Town of Northam are co-sponsors of the event.

In the inaugural Avon Descent in 1973, some 53 teams competed in power boats, canoes and inflatable craft. Approximately 350 teams entered the 1979 Avon Descent and they were equally divided between power boats, canoes and other craft, principally surf skis.

Following a request from The Tree Society and public statements from the Conservation Council, it was decided to observe the 1979 Avon Descent and to report on the environmental impact associated with the event. The Conservation Council of Western Australia has previously raised objections to this event, and the Blackwood Classic. The Council bases its criticism on the damage that may be caused by the competitors, in particular the power boats, to the riverine vegetation and to the environment in general. It suggests that canoes are the only appropriate form of water-borne recreation for the non-estuarine sections of Western Australia's rivers.

2. THE RACE

The 1979 Avon Descent was held over the weekend of 28 and 29 July. The water level in the Avon River was very low, and this resulted in the organisers withdrawing the section between Katrine Bridge and West Toodyay Bridge from the race. In previous years, the overnight stop has been at Posselt's Ford, approximately 16 km. downstream from West Toodyay, however, this year a disused quarry several kilometres further downstream was chosen as the camping ground. The second day's competition was from the quarry to No. 4 car park opposite Heirisson Island.

An evaluation of possible impacts arising from the race suggested that there would be two pressures on the Avon Valley; the competitors as they made their way downstream, and the spectators who gathered at various vantage points along the way. Arrangements were made to observe each of these groups.

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2.1 Impact of Competitors on the River

As has been previously mentioned, this year's race was in very low water conditions (Fig. 6). For much of the first day, the competitors had to drag their craft across sandbars, through shallow pools and over rapids. Only when the Avon River was running through defined channels was there sufficient water to successfully use paddles or outboard motors. These deeper stretches, however, tended to be relatively short, in many instances only several hundred metres in length.

Because of these conditions, the potential for damage to the riverine vegetation by competitors was limited.

Prior to the race, it had been suggested that a major area threatened by the event was the melaleuca thickets downstream from West Toodyay. These thickets extend for a distance of some 12 km, although they also fringe the river further downstream. Information provided to the Department suggested that the thickets acted as a silt trap, preventing infilling of the river downstream, and were also important as a waterfowl nesting and breeding area. Power boats are alleged to have damaged the thickets in previous years, mainly as a result of forcing a passage through the trees.

The low water level meant that the channels through the thickets were well defined, and the craft were able to navigate along them at very low speed (Fig. 10 and 11.) From observations made within the thickets, it is possible to say that while minimal damage to the vegetation resulted from this year's event, there is a definite potential for problems to occur in years of higher water levels. Several power boats were observed trying to force a passage through the vegetation, even though they were in defined water channels. In years when the water is 1 m higher than this year, the channels would not be defined in these thicket areas and there would be a very strong likelihood that power boats could attempt to force a passage through and hence have an impact on the vegetation. While the actual damage that they may cause has not been observed, there are grounds for concern. Canoes on the other hand, in part because of their size and construction and in part because of their mode of power, are unlikely to impact the melaleuca trees in any water level.

Beyond these thickets, the competitors were generally within well-defined channels, and the water level permitted a relatively free passage, only obstructed by rocks and the occasional tree that had fallen into the river. Little damage appeared to be caused once the competitors had gone beyond the melaleuca thickets.

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The various obstructions that challenged the competitors along the way did result in two areas of concern. One of the requirements of all competing craft was that they should have sufficient bouyancy to remain afloat if swamped. While the organisers suggested that inner tubes would be suitable for this purpose, most competitors used styrene foam. In many instances, this foam was not protected from impact damage, and portions of foam were observed drifting down river during and following the event. Although the foam may not affect the fauna in the river, its presence does intrude into the aesthetic environment.

Obstructions also created dangerous situations for the competitors. Tree trunks generally presented few problems unless craft were caught on them. In these instances, the crews generally tried to gather sufficient speed to ride into the log, and then rock or push the craft over it. On some occasions, these obstacles became very congested, and sometimes included both power boats and canoes. At times, the power boat crews showed little regard to the situation, and charged at the obstruction while canoes and other boats were already caught on it. In addition, a number of boat crews did not turn their motors off when negotiating these obstacles, and areas of shallow water. With their propellers rotating out of the water, they created an extremely dangerous situation for other competitors.

Some disturbance of river sediments and of the river banks by the wash from the power boats was noticed. Neither of these appeared to be significant. Because of the low water level, competitors were unable to reach high speeds for very long periods of time.

The Avon Descent is held at a time of the year when the river could be expected to be close to peak flow. Under these circumstances, the event will not disrupt the activities of waterfowl as they do not start nesting until the waters have subsided and stabilised. This usually does not begin until the latter part of the year.

2.2 Impact of Competitors and Spectators at the Quarry

The first day of the Descent was from Northam Weir to a quarry at the end of Chris Hill Road, Toodyay. This quarry is reserved for railway purposes and is vested in the Minister for Railways (Reserve No. 29755). Surrounding this location is the Avon Valley National Park (Reserve No. 30192).

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2.2 (Cont'd)

Some two thousand people followed the competitors along the first day's section, and most camped overnight. The organisers had arranged for the quarry to be used for this purpose, and toilet facilities were provided. Many people, however, established campsites along the river for a distance of perhaps three kilometres. While the quarry appeared to be a satisfactory location for camping, there was insufficient space and people overflowed into the adjacent bush. Minimal supervision was provided to direct people to camping spaces, and to prevent people from camping in the bush. This unorganised camping presented several potential problems, including rubbish control and collection, hygiene, and threat of bushfires. It should be noted that a large number of the campers were spectators and that the organisers had only intended the camping area for officials, competitors and their support crews.

Of major environmental concern was some clearing that had taken place along the river foreshore adjacent to the quarry. A bulldozer had indiscriminately cleared an area of 50 metres by 50 metres at the finish line so as to allow competitors to remove their craft from the water and store them overnight (Fig. 15). The section of the valley which was cleared is part of the Avon Valley National Park, an 'A' Class reserve, and was undertaken without the authorisation of the National Parks Authority.

The cleared land is composed of silt and clay, with exposed granite rock, and has a slope of up to 20 degrees. No care had been taken with the bulldozing and the cleared vegetation was simply pushed to one side.

There was considerable pressure on this clearing as the competitors finished the first stage, and again when the second leg commenced. Some rain fell on Saturday night and while it did not cause too many problems at the quarry, this area on the river foreshore rapidly became very muddy and slippery (Fig. 16). A follow-up visit one week later showed that erosion had begun on the slopes, particularly in the bulldozer tracks which ran towards the river.

The quarry is accessible along two gravel roads, one that follows the river from West Toodyay, and Chris Hill Road, which leads to the Toodyay Road. Almost everyone who camped overnight travelled along the river road, which crossed the standard gauge railway at the quarry. For safety reasons only one car at a time was allowed across the railway, and this resulted in a considerable bank-up of traffic.

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2.2 (Cont'd)

Following the commencement of the second day, people tried to leave the quarry. As the river road was blocked by vehicles heading towards to quarry, only Chris Hill Road was available. There are several steep inclines along this road, and the road was rough and slippery from the rain. Several caravans had been used overnight at the quarry and one of these became stuck on one of the slopes, preventing traffic leaving the quarry for approximately half an hour.

2.3 Impact of Spectators on the Swan/Avon Valley.

A large number of people, many of whom were support crews to the competitors, watched the start of the race at Northam and then followed the craft down river. Roads have been constructed near the Avon River for the whole distance to Chris Hill Road. Although the standard gauge railway and private property lie between the road and the river, some people stopped along the way and made their way to the river (Fig. 7). While these people tended to congregate into small groups, they did not appear to apply substantial pressure to the locations that they visited.

Most people concentrated at the several bridges across the Avon, and some rapids near Rosselt's Ford. At these points, significant pressure was observed but in general no damage took place. The area where the craft were placed back into the river at West Toodyay Bridge, was visited late on Saturday afternoon. There were indications of trampling of the winter grass, and a small amount of litter was evident. However, neither could be seen as significantly adverse.

In order to observe both the competitors and the spectators, two vehicles were used on the Sunday. One vehicle followed the river by means of the Westrail track, and the other was to visit vantage points along the Avon Valley, such as Bald Hill Lookout, Walyunga Lookout, and Walyunga Pool.

A surprising number of vehicles, mainly four wheel drive, had gained access to the river and were camped at various points along its length (Fig. 19). They had presumably used either the Westrail track, which has locked gates at various locations, or had travelled through private property and perhaps the conservation reserve (Reserve No. 30191) on the northern side of the river. Many of them were organised into groups. There are grounds for concern at this activity as no appropriate management controls have been instigated to cater for them, and they also pose a bushfire and litter threat. This type of activity probably takes place throughout the year.

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2.3 (Cont'd)

Although Bald Hill lookout has an outstanding view of the valley, no people were observed at that location. This is in contrast to Walyunga Lookout, where the numbers were such that the Department's vehicle could not approach the parking area because of congestion. National Parks Authority staff counted over 250 vehicles in the vicinity of the lookout. This is considerably in excess of the capacity of the parking area, and cars were parked along the access road and in the bush. Many of these people walked down to the river along a well-worn bush track. While they did not create any environmental problems, there is a safety issue as all people going to the river had to cross the railway line at a bend.

Walyunga National Park has always had to withstand the brunt of spectators watching the competitors negotiate rapids near Walyunga Pool and Long Pool. This pressure is not substantially above that which is applied on a normal fine weekend. In both instances, the visitors normally concentrate along the river near the parking areas. The Park has facilities which can cater for most of this pressure. Due to limited parking availability, only 800 vehicles were permitted to enter the Park. Many other people stopped along the access road leading to the pools. The spectators treated the day as a normal picnic/barbeque occasion and did not apply undue pressure to the river fringes.

Below Walyunga National Park, the Swan River passes through the last set of rapids, at Bell's Rapids. A number of people had gained access to this location by driving through private property and some groups had erected tents. One matter of concern that was evidenced here and also at Walyunga Pool was the activities of a helicopter which was carrying a camera crew. At both locations the helicopter hovered very close to the rapids, competitors and spectators (Fig. 23). This proved to be disconcerting to some of the crews, and dangerous to spectators perched on rocks near the water. The down-draft from the rotors caused spray and foam to be thrown about and blew people from their positions. At times, the helicopter was less than 5 metres from the water.

Once the competitors had passed this point, they were close to the tidal limit of the River, and very few obstacles remained. Most spectators downstream of Bell's Rapids congregated at the various bridge crossings, particularly Upper and Middle Swan Bridges. These locations are already somewhat degraded and the spectators caused few problems, except to congest traffic. The competitors are unlikely to cause erosion problems because of the type of craft that they were using, which were mainly shallow draft boats.

3. CONCLUSIONS

The Avon Descent receives considerable support from competitors and spectators alike. The event is rapidly becoming a tradition and a highlight of the winter period.

3. (Cont'd)

It also encourages substantial numbers of people to watch the race from vantage points which would normally not be used. This particularly applies to that section of the Avon Valley from Northam to below West Toodyay.

From observations made during this year's event, there do not appear to be any grounds based on environmental considerations, to suggest that the Avon Descent should not continue. However, a number of issues were noted which should receive close attention by the organisers :

a. The timing of the start for each class in the competition can result in conflict between the power and non-powered craft. This has been seen to result in safety issues which should be examined with a view to eliminating them. It may be that by starting the power boats some three hours after the last of the other classes, an adequate separation of the two modes of power will be achieved and the safety problems resolved.

b. A strictly enforced rule of the race should be that each outboard motor be turned off when it is out of the water or when no crewmember is controlling it from within the boat.

c. As a design rule, the adequate provision of flotation material in each craft is most necessary. However, the material should be properly secured to the craft and contained in such a way that it cannot be broken up. Little inconvenience or additional cost would be involved in, for instance, fibreglassing around the styrene to enclose and protect it. The organisers have noted the advantages of using an inner tube for bouyancy and comfort purposes, and the competitors should be encouraged to use this method wherever practicable.

d. Probably the most evident environmental impact of this year's race was the clearing of the foreshore vegetation at the quarry. No care had been taken in the conduct of this operation. This has resulted in further degradation of the area through erosion. As the land is part of the Avon Valley National Park, the question of rehabilitation, etc. rests with the National Parks Authority.

e. While the quarry appeared to be a good site for a camping area, some organisation was desirable to control people who moved into the adjacent bush. This may not have been necessary if adequate restrictions had been placed on the people who could camp at the quarry.

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f. No rubbish bins were provided in the camping area. This should have been one of the first aspects organised, as a lack of receptacles provides no encouragement for people to dispose of their rubbish properly. Also, while the organisers gave assurances that the rubbish would be collected after the event by the Town of Northam, this had not been carried out by Monday 30 July. In fact, the National Parks Authority cleaned up much of the quarry on that day. For hygiene reasons, arrangements should have been made to remove the rubbish on the Sunday, after the quarry had been vacated. Considerable amounts of litter and rubbish were observed in the adjacent bush two weeks after the event (Fig. 24).

g. As part of the current upgrading of the standard gauge railway, the quarry is to be re-opened as a source of ballast. Westrail plan to use the quarry for some time, and hence it will be unavailable for future Avon Descents. This will result in the organisers having to find another campsite, either at Posselt's Ford, or another location. When this choice is made, care should be taken to control the number of people who use the camping area, and toilet and rubbish facilities should be provided for the campers. In addition, suitable arrangements should be made to ensure reasonable traffic flows to and from the site.

h. Modifications to this site and in other areas should only be carried out with the approval of the owner or vested authority, and considerable care should be taken in carrying out such tasks to ensure minimal environmental consequences.

The impact of the 1979 Avon Descent was not substantial nor permanent in nature. However, the Avon River was very low, and the impact of the competitors, and in particular the power boats, would be different in a year of high flow. The Avon Descent should be observed in such a year so that a better idea of the event's overall impact can be determined.

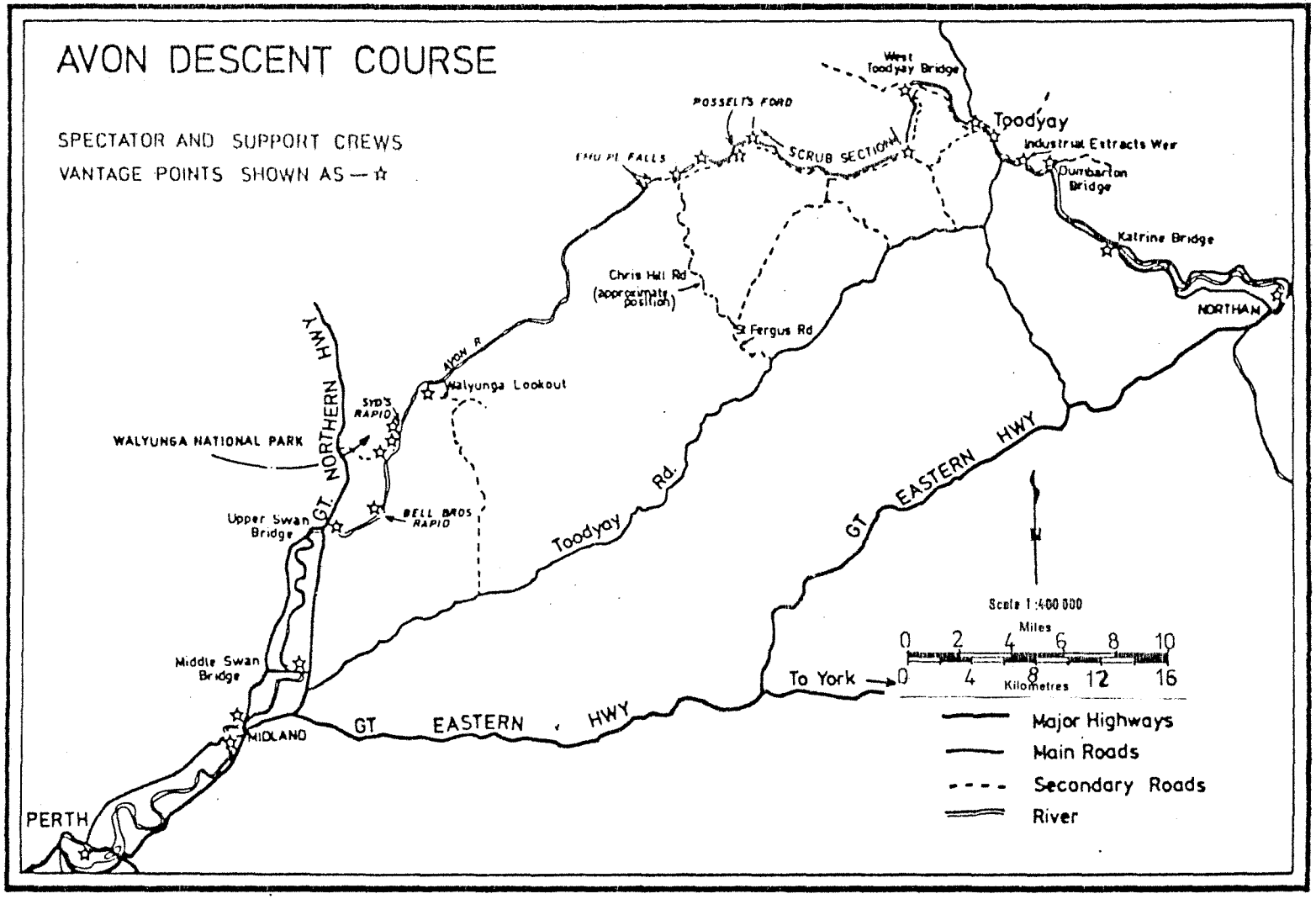

AVON DESCENT COURSE
SPECTATOR AND SUPPORT CREWS
VANTAGE POINTS SHOWN AS — ☆
West Toodyay Bridge
POSSELTS FORD
SCRUB SECTION
EMU PI FALLS
Toodyay
Industrial Extracts Weir
Dumbarton Bridge
Katrine Bridge
NORTHAM
Chris Hill Rd (approximate position)
St Fergus Rd
AVON R
Walyunga Lookout
SYDS RAPID
WALYUNGA NATIONAL PARK
GT. NORTHERN HWY
BELL BROS RAPID
Upper Swan Bridge
Toodyay Rd.
GT EASTERN HWY
Middle Swan Bridge
MIDLAND
GT EASTERN HWY
To York
PERTH
N
Scale 1:400 000
Miles
0 2 4 6 8 10
0 4 8 12 16
Kilometres
Major Highways
Main Roads
Secondary Roads
River

FIG 1

Fig. 2 : Crowd scene at the starting line, Northam.

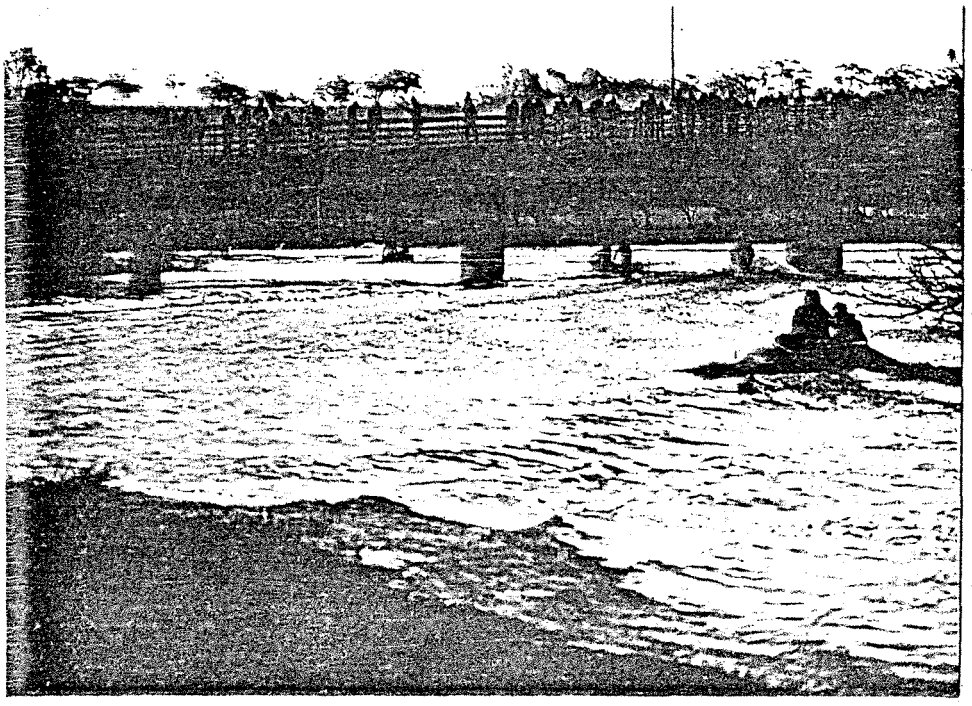


Fig. 3 : Boat wash on Northam weir.

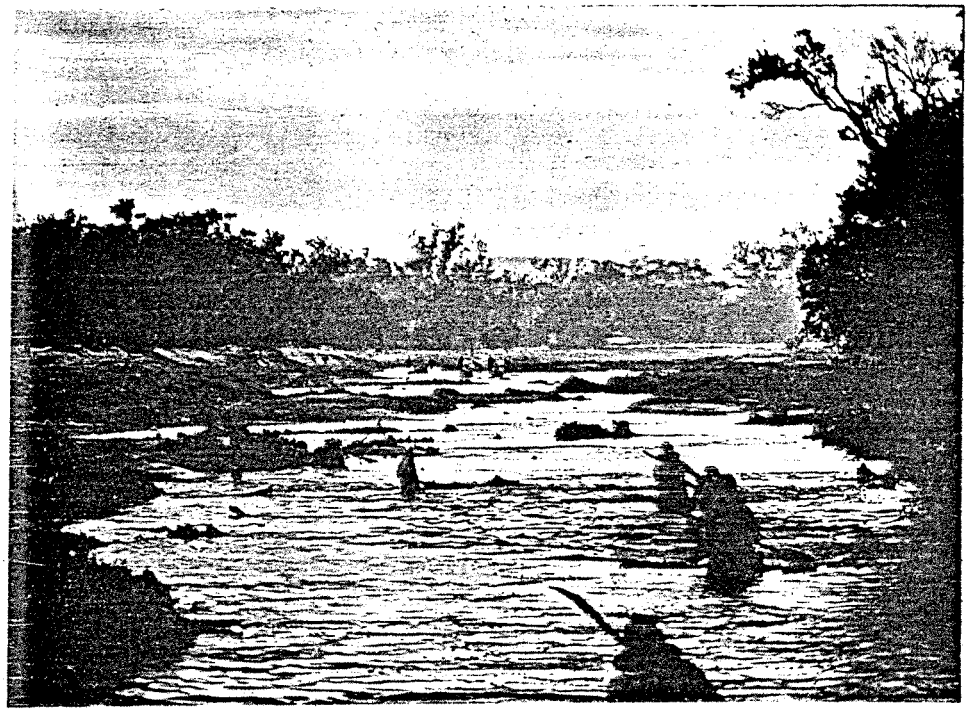
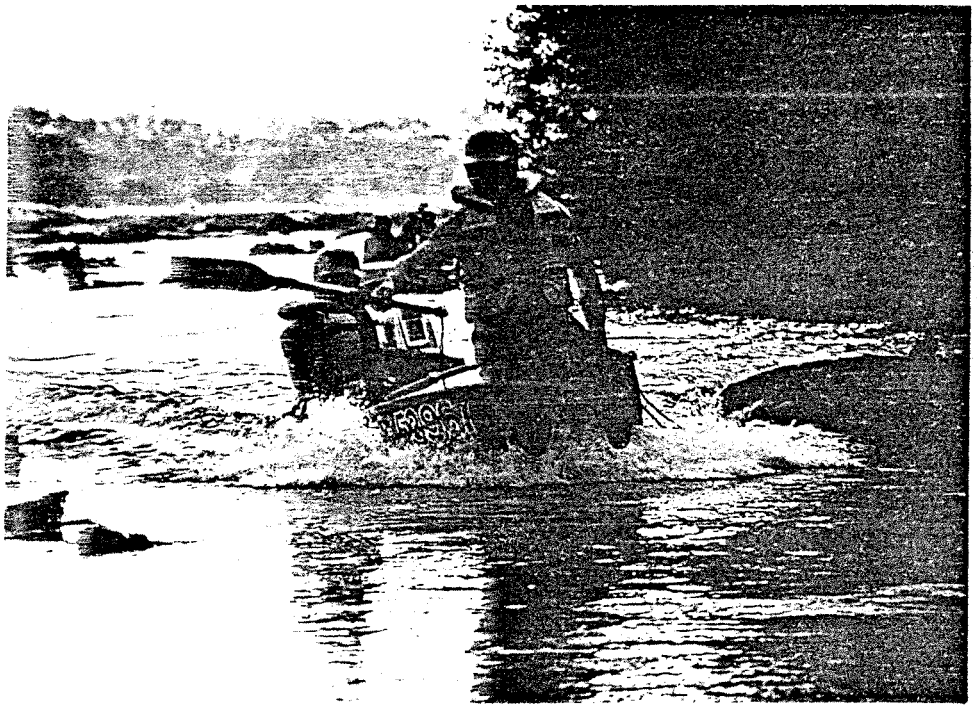


Fig. 4 : One and a half hours after beginning, the first power boats arrive behind the Westrail freight yard, on foot.



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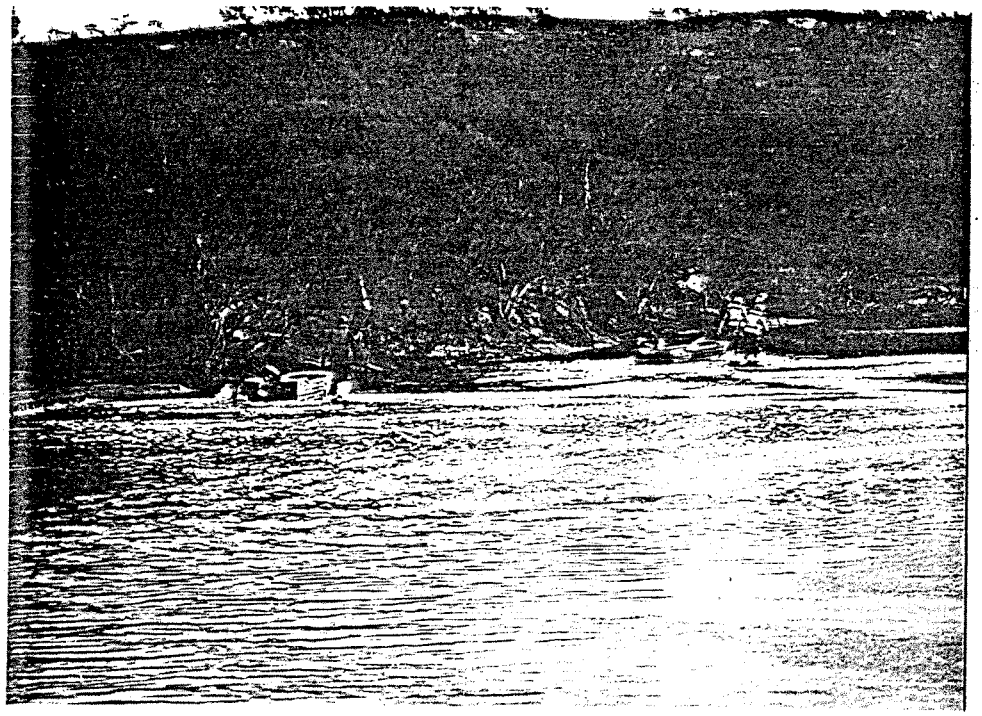

Fig. 6 : Shallow water on the Avon. Most of the section between Northam and Katrine Bridge was like this.

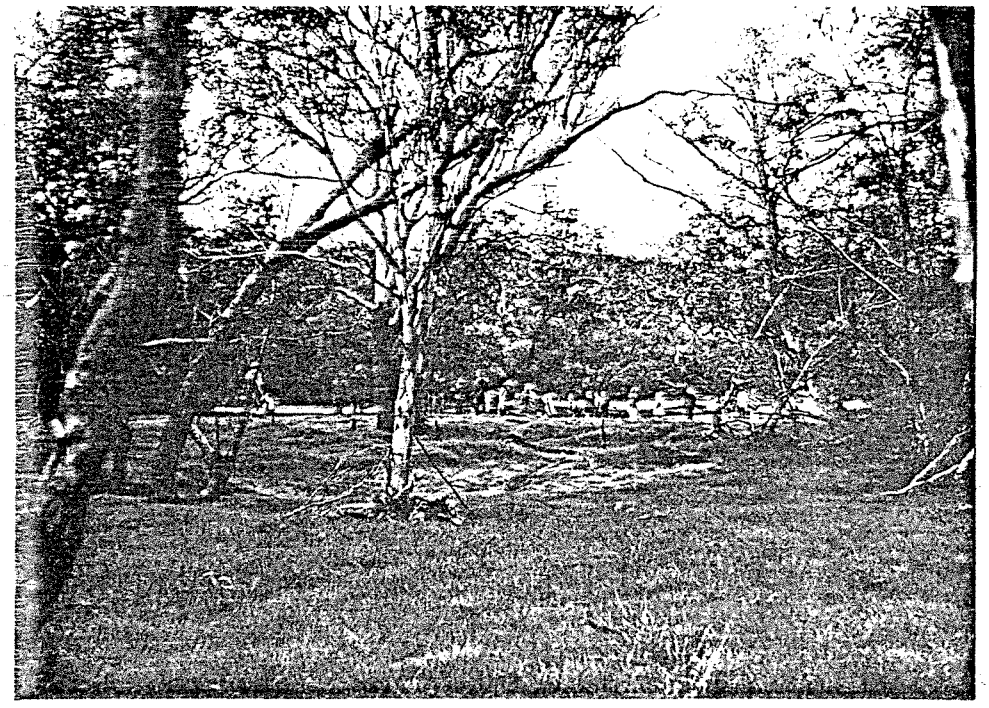

Fig. 7 : Spectators, up stream of Katrine Bridge, crossed the railway line and paddocks to get to the river. Note that they congregated together.

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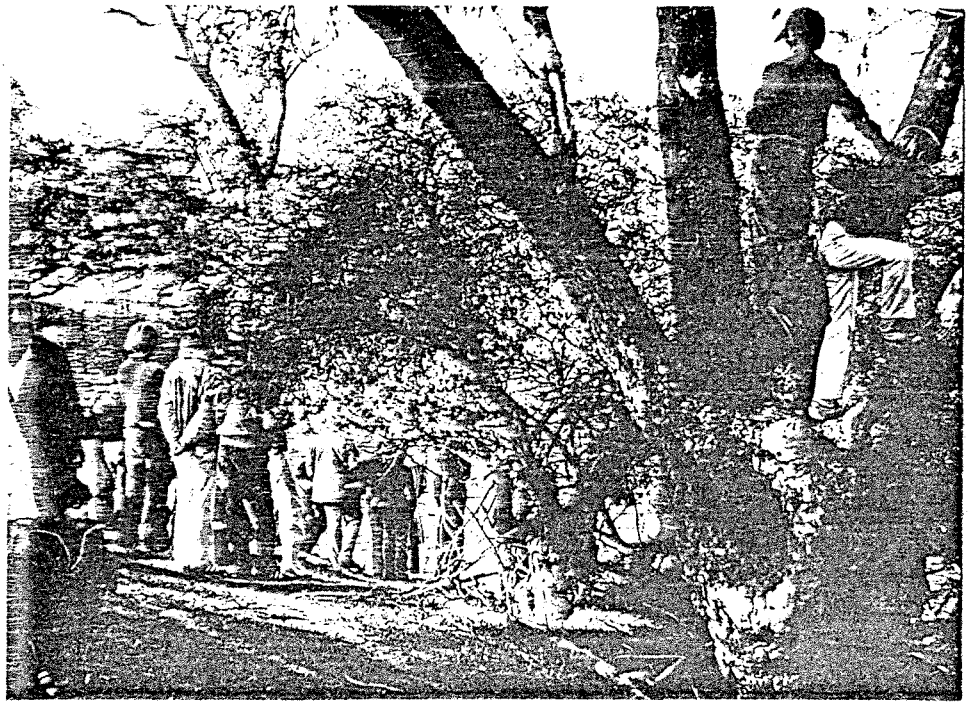
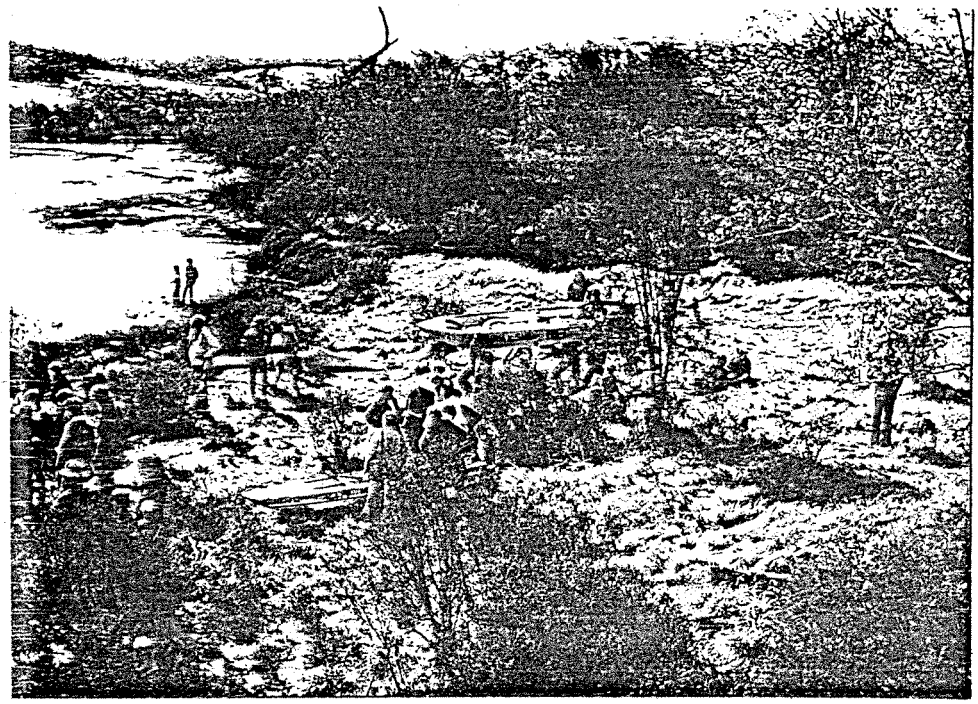


Fig. 9 : Spectators standing on the bank at Katrine Bridge watching competitors leaving the water.



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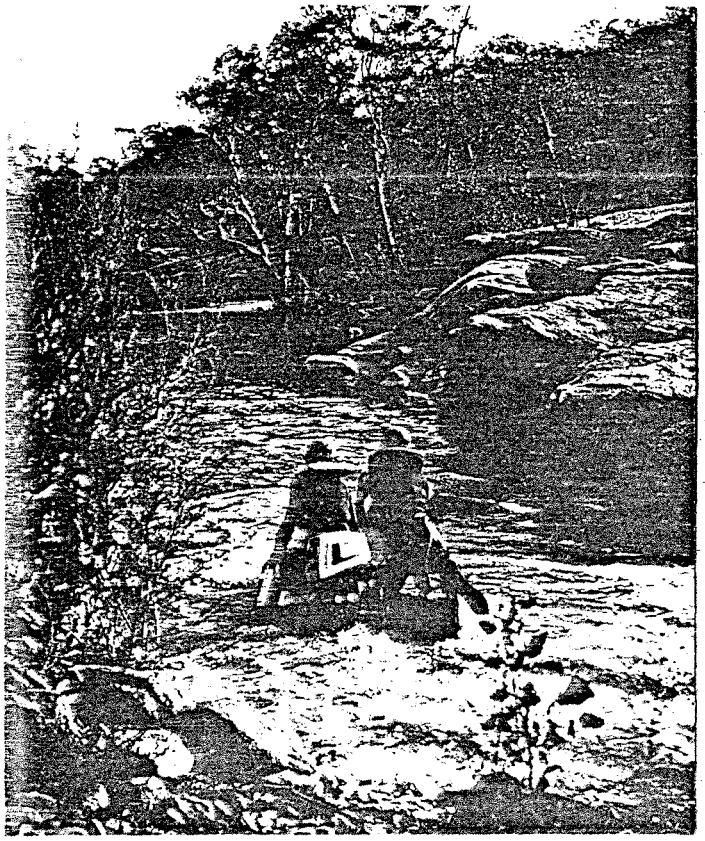
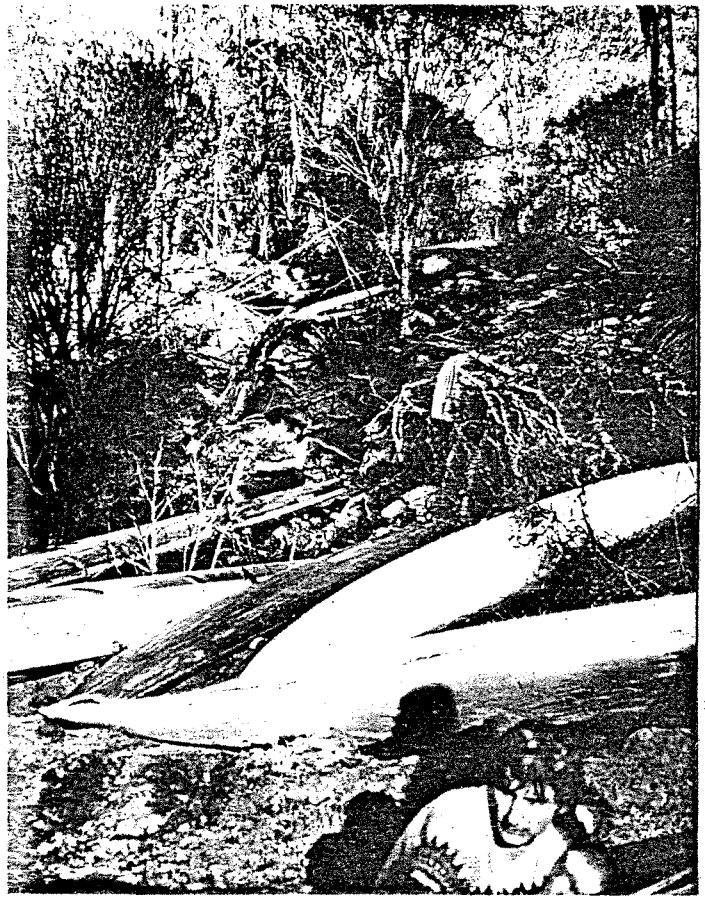


Fig. 14 : Power boat negotiates rapids below Posselt's Ford.



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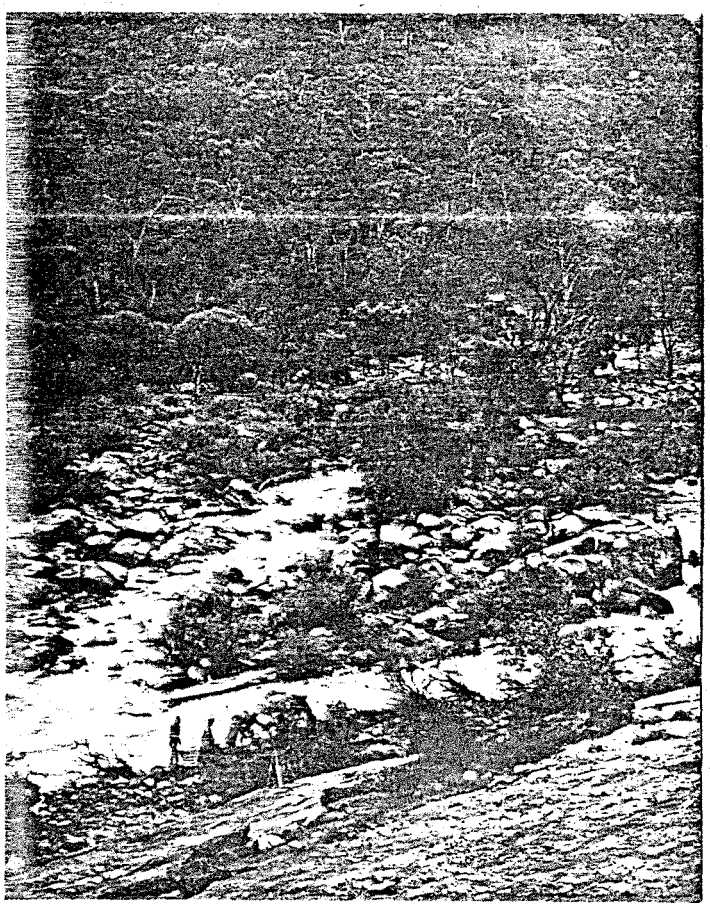

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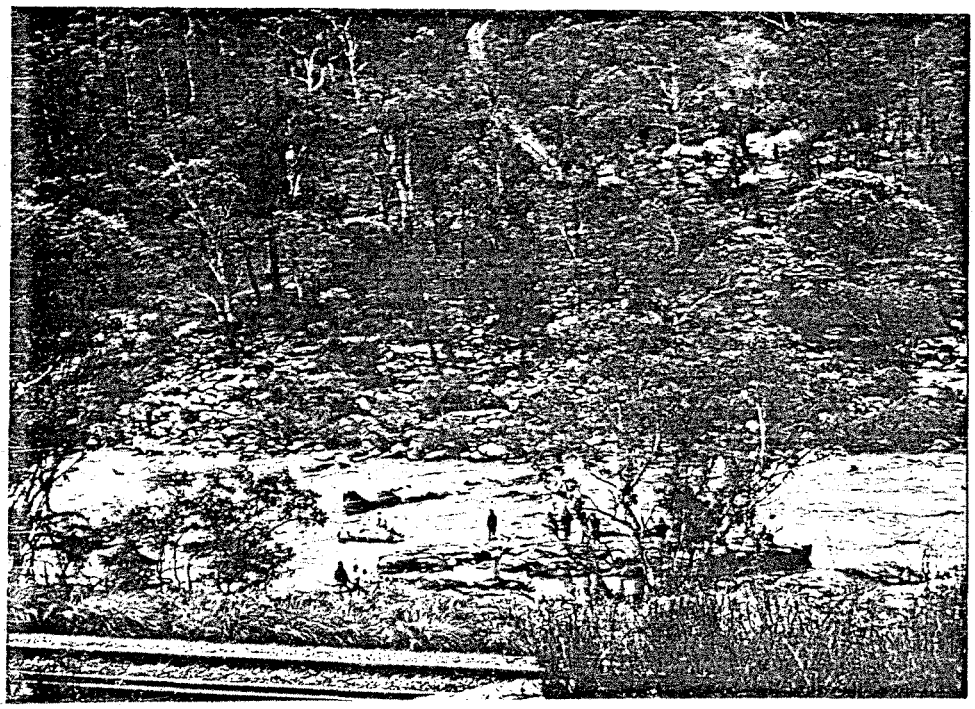


Fig. 19 : Competitors and campers at a hazard upstream of Walyunga National Park.

Fig. 20 : Crowded car park at Walyunga Pool.

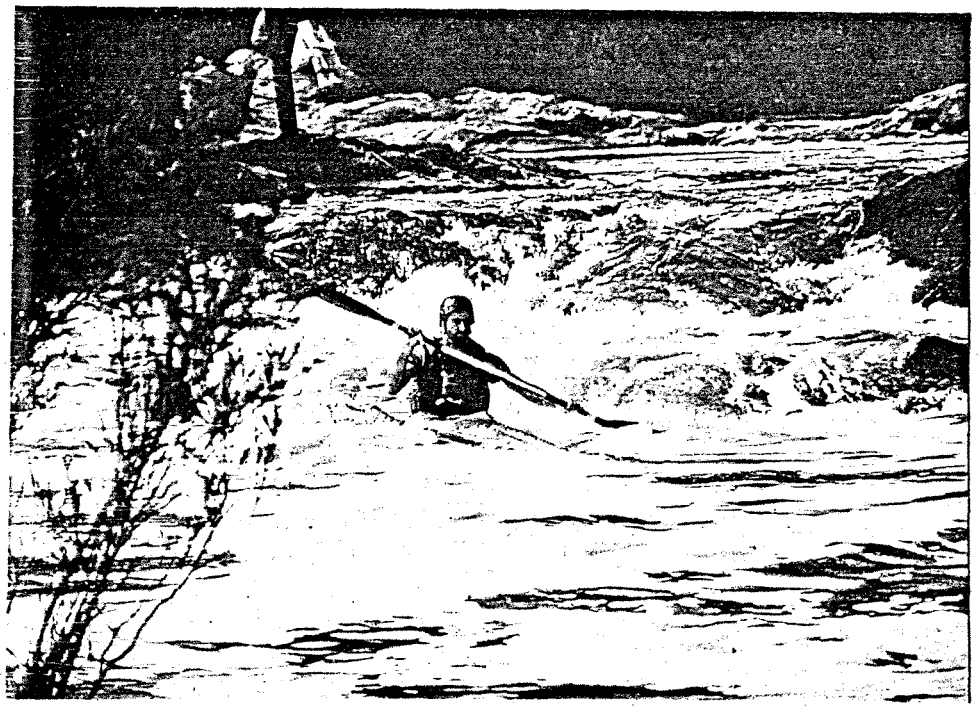
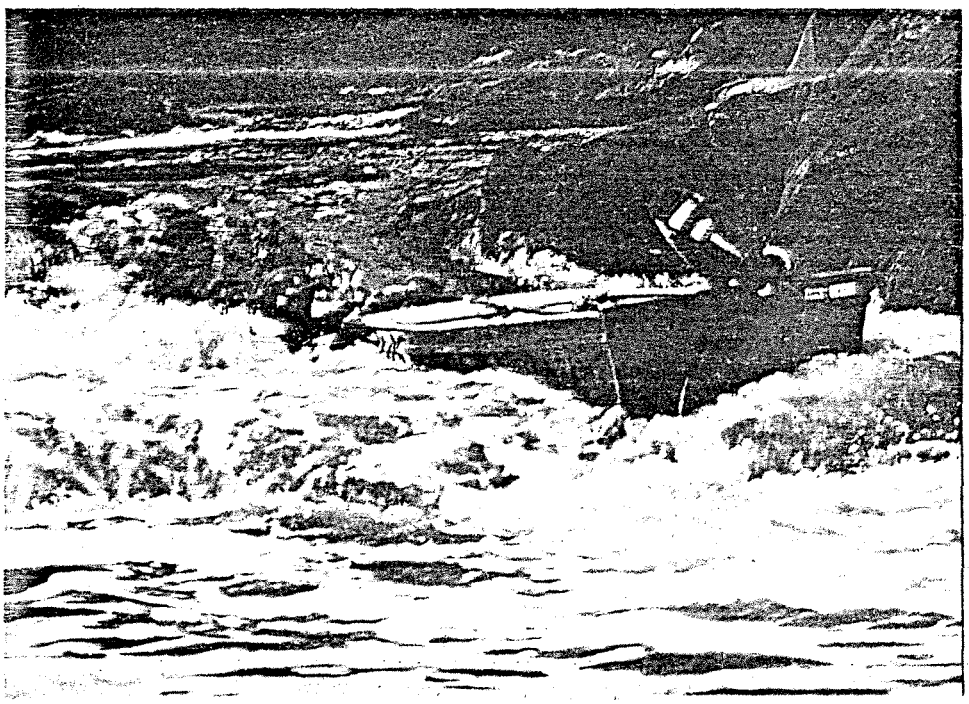


Fig. 21 & 22 : Two different methods of negotiating Bell's Rapids, downstream of Walyunga National Park.



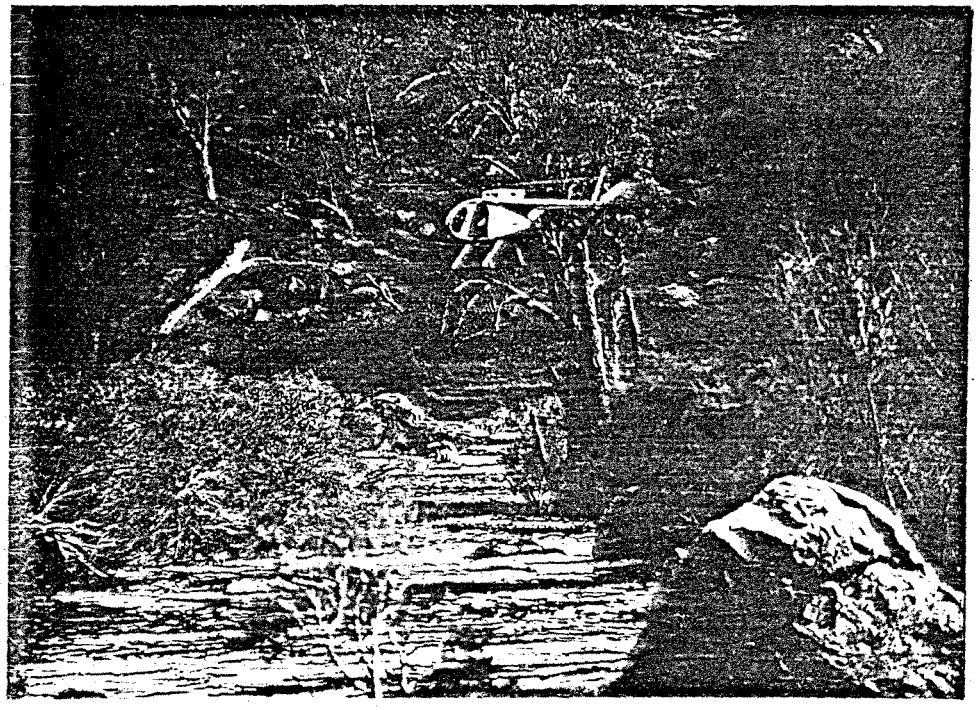


Fig. 23 : The helicopter hovers very low above a canoe, with a cameraman sitting in the doorway.

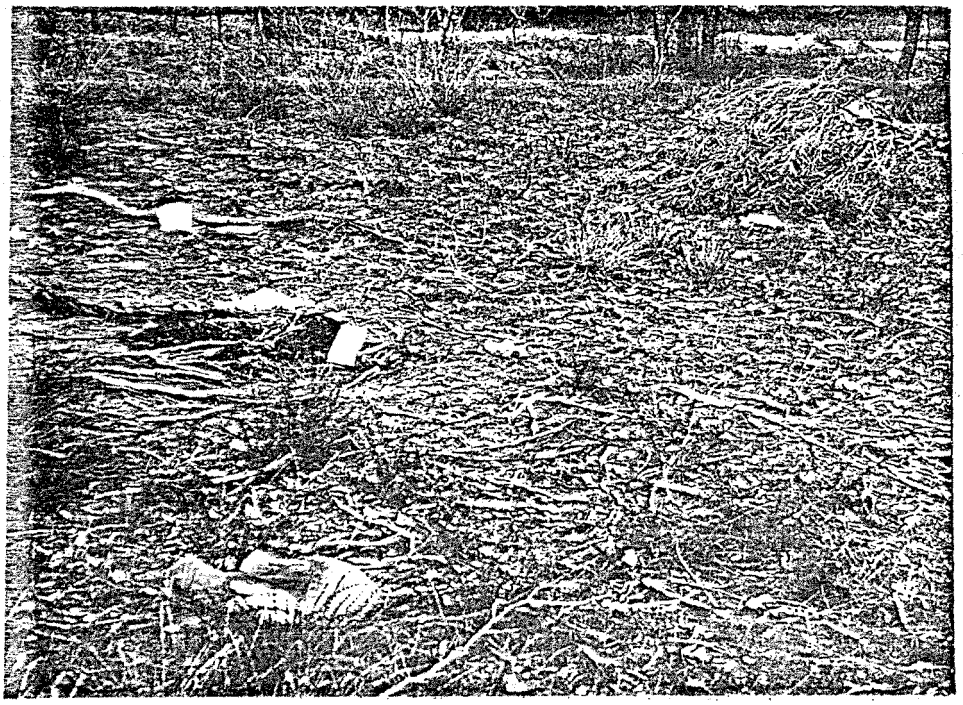


Fig. 24 : Aftermath. Rubbish lies in the bush at the quarry some 10 days after the race.