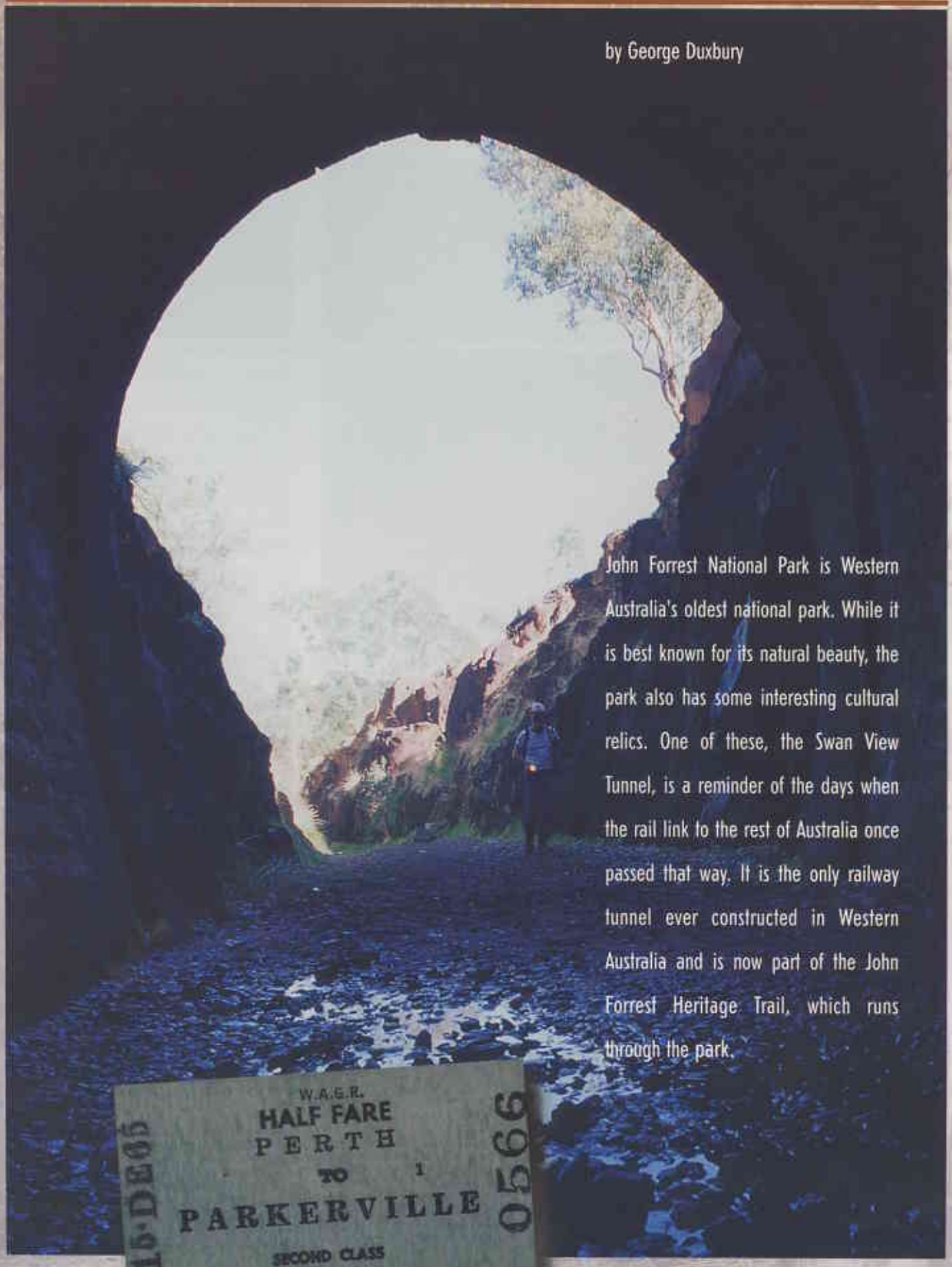
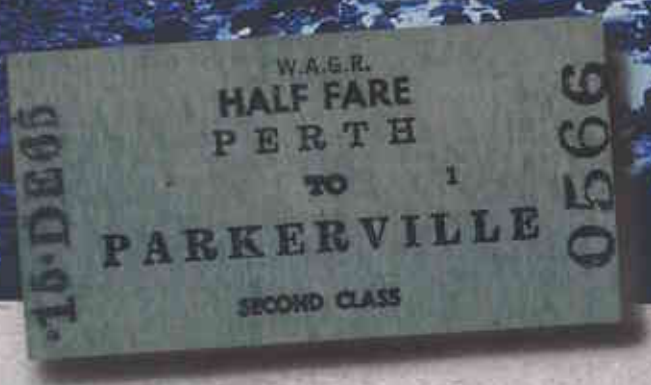
RAIL AGAINST TIME

by George Duxbury



John Forrest National Park is Western Australia's oldest national park. While it is best known for its natural beauty, the park also has some interesting cultural relics. One of these, the Swan View Tunnel, is a reminder of the days when the rail link to the rest of Australia once passed that way. It is the only railway tunnel ever constructed in Western Australia and is now part of the John Forrest Heritage Trail, which runs through the park.



Straddling the Darling Range, John Forrest National Park is set in jarrah forest that is still largely in its natural state. In late winter and spring, wildflowers are profuse and colourful, displaying the wide variety of plants that inhabit the northern jarrah forest.

Having long attracted visitors, the park also has an interesting history. According to Aboriginal people, the rainbow serpent or Waugal crawled across the land, leaving streams and waterways in its wake, and thence created Jane Brook. The rocks in and along the streams are said to be the droppings of this wondrous creature. Surrounding the centrally located tearooms are rock gardens, built by sustenance workers during the Great Depression of the 1930s. The gardens lead down to Jane Brook, which has been dammed to created a pleasant pool. And a historic railway tunnel still survives intact from the days when all east-west rail traffic passed through the park.

CONSTRUCTION

The original railway line, built in 1884 and running from Midland to Mundaring, was so steep (up to 1:25) that trains had to have locomotives pushing from behind, as well as pulling from in front, to get them to the top. This caused a number of accidents and problems, and an easier route was chosen (at a grade of 1:44) to follow Jane Brook. It was incorrectly named the Mahogany Creek Deviation.

The man in charge of the project to build the new line and tunnel in 1893 was the great Charles Yelverton O'Connor—the then Engineer-in-Chief of Western Australia's Government Railways. C Y O'Connor later gained fame for designing Fremantle Harbour and the Eastern Goldfields Water Supply. The surveying was carried out by John Talbot Burnett.

The contract to build the tunnel was won by the South Australian firm Smeaton and Hedges, and work began in 1894. In all, five bridges, six short cuttings and a tunnel had to be built to lay the new line. Four of the bridges and the tunnel were within John Forrest National Park. The work was hard. Workmen lived in tents near the tunnel. The rock was unstable ancient granite that had to be blasted and shored up on the embankments. The 340-metre-long tunnel had to be lined with masonry walls and an arched brick roof to stop rock falls.

The work was scheduled for completion within 12 months, but unexpected difficulties in constructing the tunnel (which had to be cut through solid rock), wet weather and other problems (including a short strike by horse drivers for an extra shilling on Sundays) helped to slow the project down. The tunnel was completed in 1895 at a cost of about £12,000.

Previous page
Main: The Swan View Tunnel, which was completed in 1895.
Photo – Ann Storrie
Inset: Ticket from the final train journey.

Above left: Wandoo country within John Forrest National Park.
Photo – Dennis Sarson/Lochman Transparencies

Left: Wildflowers in the park during spring.
Photo – Jiri Lochman

Top left: Tunnel arch.

Top right: The eastern end of the tunnel.

Above: Two of the six bridges within the park.
Photos – Ann Storrie

ACCIDENTS AND INCIDENTS

Being an engine driver at the turn of the century was very different from now. Shortly after the opening of the new line in 1896, engine crews began complaining about problems being experienced while passing through the tunnel. The locomotive cab was open and this, combined with poor ventilation within the tunnel, meant that drivers and firemen were engulfed in smoke and fumes from the locomotives as they slowly inched their way through the tunnel, pulling heavy loads. Train crews found the summer months best for passing through the tunnel, as the strong easterly winds—common to the area at that time of year—blew the smoke and steam past the cab in the opposite direction to their travel.

The first serious accident occurred in 1903, when a driver fell from the engine after being overcome by asphyxiating fumes. The fireman heard the bump, but in the darkness and belching smoke, paid no attention to the sound. It wasn't until the engine reached daylight at the other end, that the driver's absence was noticed. The fireman stopped the train and searched the tunnel. Fortunately, his unconscious partner had fallen clear of the wheels and sustained only minor injuries.

The worst accident took place on 4 November, 1942. A double-headed goods train, pulling a load of some 431 tonnes (just 14 tonnes short of its maximum allowable load), entered the tunnel at walking pace. The locomotive crews were quickly overcome by heat and fumes and rendered unconscious. The driver of one of the engines had managed to shut off power before he passed out, but the driver of the second engine was overcome before he could do likewise. He died on his engine in the tunnel. The train started to roll back, which caused the engine still on power to slip into reverse, and the train began powering backwards.

The guard had already alighted and applied the handbrakes (although not the vacuum brake, as he thought the driver would quickly regain control) on the wagons. However, the engine crews were in no condition to regain control and the train careered through Swan View Station at an estimated 70 to 80 kilometres per hour. The runaway train went into a runaway dead-end, which had been constructed in case of such an incident. The rear portion of the train piled up in a mass of wreckage. Fortunately, this had a cushioning effect and saved the three unconscious men from serious injury.

Following this accident, locomotive loads, levels and configurations were

changed, but tunnel ventilation still proved difficult to overcome, and it was decided to build a tunnel bypass on the northern side. This was completed in November 1945 at a cost of about £150,000 ($300,000) and the tunnel was then only used by trains moving downhill. The last work on the tunnel was done in 1956, when the track was lowered by 30 centimetres to allow passage of the bigger locomotives in use at the time, and to correct drainage problems.

THE LAST TRAIN

The Mahogany Creek line, from Midland to Northam, continued to be used until the Avon Valley dual gauge railway came into full operation. The line closed on 13 February, 1966. Although the trains are now long gone, the old railway alignment remains, clearly delineated by the embankments and bridges. Park visitors can follow the path of the old railway, which forms the basis of the John Forrest Heritage Trail, and walk through the tunnel.

But the old railway is far from the only attraction of John Forrest National Park. The scenic drive into the heart of the park affords panoramic views over Perth and the Swan Coastal Plain. Once they enter its forested hills and valleys, good walktrails throughout the park encourage visitors to wander through the bushland and admire the scenery of the scarp. Some of the large, exposed granite tors have been eroded over the centuries into fantastic shapes, adding to the diversity of the landscape. It shows that we don't have to go to the outback to enjoy the wonders of a beautiful place. In John Forrest National Park there is a place of beauty, close by.

Top: A major accident occurred in the park in November 1942, when locomotive crews passed out from heat and fumes in the poorly ventilated tunnel.
Photo – Trevor Marshall

Above left: Falls in John Forrest National Park.
Photo – Jiri Lochman

Above: Visitors can now walk through the tunnel along the John Forrest National Park Heritage Trail.
Photo – Wayne Storrie

TUNNEL FACTS

- The length of the tunnel is 340 metres.
- The maximum grade through the tunnel is 1:49.
- The tunnel runs through granite, with a maximum cover of 27.5 metres above the ceiling.
- The maximum height at the crown of the arch is 4.3 metres.
- The extreme width is 3.8 metres.
- The walls are lined with rock to the height of 2.4 metres.
- The entire arch is lined with 330,000 bricks, to stop pieces of granite falling from the roof onto the tracks.

Recently retired, George Duxbury was a national park ranger for 23 years, and Senior Ranger at John Forrest National Park for almost 12 years. He has a long-standing interest in the park's old railway system. George can be contacted on (08) 9298 8367.

Armed with sketch pad, pencils, pens and paints, an intrepid group of artists set off on a brand new LANDSCOPE expedition. See 'Awash with Colour' on page 28.

Four more conservation reserves now offer greater protection to areas in and around the Mitchell Plateau. See 'Parks of the Plateau' on page 48.

Winner of the 1998 Alex Harris Medal for excellence in science and environment reporting.

LANDSCOPE

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Most of us only know of the exotic pest ants that invade our kitchens. But what of the great Australian ants? See page 23.

Ningaloo Marine Park and Cape Range National Park lie side by side in our north-west corner. Read about how they are managed on page 17.

Scientists continue to develop ways to locate, track and trap animals for research. See 'Tools of the Trade' on page 41.

FEATURES

REGULARS

COVER

For many years, the decline of frogs in various parts of the world has puzzled conservationists. A breakthrough came in 1996 when scientists isolated a new kind of fungus that infects and may kill frogs. Western Australian research now under way is beginning to answer some initial questions about the fungus and its impact on our unique frogs. See 'In Pursuit of the Frog Fungus' on page 10.

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Illustration: Gooitzen van der Meer
Cartography: Promaco Geodraft
Marketing: Estelle de San Miguel ☎ (08) 9334 0296 Fax: (08) 9334 0498
Subscription enquiries: ☎ (08) 9334 0481 or (08) 9334 0437
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