

IN HOT WATER

There is no shortage of hot water at the old station homestead in the recently declared François Peron National Park. Now used as a recreational spa, the hot artesian bore water was once essential to the survival of Peron Station.

Peron Peninsula lies within the Carnarvon Basin, a geological structure lacking permanent fresh surface water. In the late 1800s, when pastoral stations such as Peron were established, shallow beach wells were built to provide ground water of

marginal quality for stock. In the early 1900s, most of the wells became redundant as artesian bores were put down to provide a greater quantity and quality of water. Over 100 bores have been built for pastoral use in the Carnarvon Basin.

Artesian ground water exists, under pressure, in the sandstone below an impenetrable layer of shale.

The pressure is created because the point where the coastal bore meets the artesian water is deeper than the source of the groundwater further

inland. When a bore is established, drilling continues until water is forced by pressure to the surface.

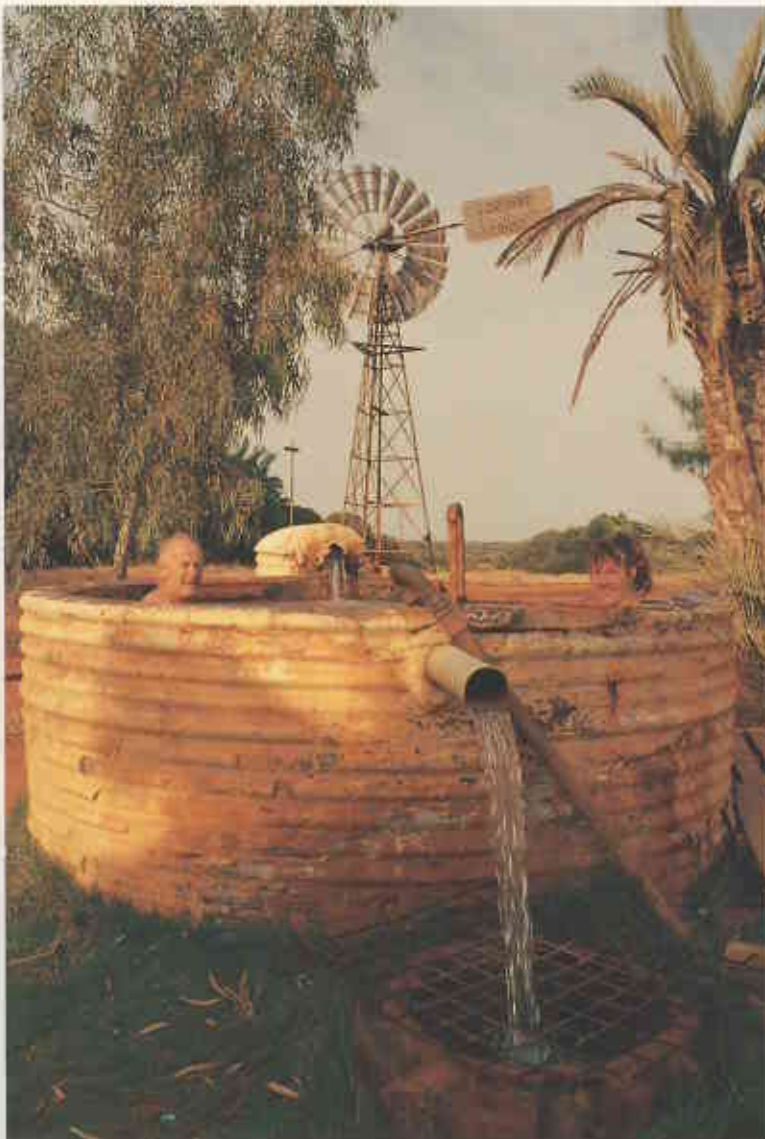
The Peron homestead artesian bore was drilled between September 1922 and July 1923, to a depth of 542 metres. The 44-degree Celsius water flows at a rate of five litres per second or 432 000 litres per day. As the water has been allowed to flow freely over the years there has been a gradual decline in pressure and flow rate. When Peron was run as a station, the water was pumped from the reservoir

glimpse of the pioneering history of the north. CALM's development plans for the homestead will highlight the feature, allowing the public to experience a semi-natural hot spa.

Left: The artesian bore at the old homestead on François Peron National Park will be developed for public use. Photo - Ron Shepherd

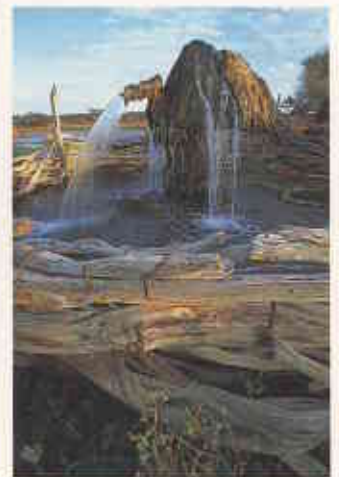
Below: An artesian bore on Nanga Station was built in the 1920s. Photo - Bill Bachman

Bottom: The Peron artesian bore is a warm 44°C. Photo - Marion White



tank by three windmills to nine watering points located in five different directions. Elsewhere on the station, windmills were used to pump water 12 kilometres from the bore. The station's five artesian bores provided water for up to 17 000 sheep.

The unusual combination of artesian water and a reservoir tank at the Peron homestead is a unique cultural feature for the new park and provides a



LANDSCOPE

VOLUME SEVEN NO.2 SUMMER EDITION 1991-92



When European scientists first set foot on our shores they found a bewildering array of animals and plants. Péron the Explorer takes an intimate look at the French scientist whose name lives in Western Australia's newest national park. See page 20.



This tour of the Gascoyne's desert coast guides you through Shark Bay and WA's newest national park. See page 10.



Close to where the fictional Gulliver is believed to have been shipwrecked lives one of the world's oldest organisms. Lilliput's Castles, on page 34, describes the creatures and the ecosystem they have built.



Seagrass covers 3 700 square kilometres of the ocean floor around Shark Bay. Grasses of the Sea, on page 42, takes us on a journey through these underwater meadows.



At first glance, Shark Bay is dry, arid and inhospitable. But if you look more closely you discover its Hidden Treasures. See page 16.

FEATURES

DESERT COAST CAROLYN THOMSON	10
HIDDEN TREASURES GREG KEIGHERY & MALCOLM TRUDGEON	16
PÉRON THE EXPLORER BARRY WILSON	20
SEA PIGS OF SHARK BAY PAUL ANDERSON	24
ISLANDS OF CONTRAST KEITH MORRIS, JENI ALFORD & RON SHEPHERD	28
LILLIPUT'S CASTLES BOB BURNE	34
GRASSES OF THE SEA DIANA WALKER	42
BIRDS OF THE BAY PHOTO ESSAY	47
MANAGING FOR DIVERSITY RON SHEPHERD	50

REGULARS

IN PERSPECTIVE	4
BUSH TELEGRAPH	5
ENDANGERED THICK-BILLED GRASSWREN	41
URBAN ANTICS	54

COVER

Green turtles (*Chelonia mydas*), the commonest turtles found along our coast, begin to congregate in the waters of Shark Bay from the end of July. The Bay is the southernmost nesting area for these long-lived animals. During summer, female green turtles lay their eggs on the white sandy beaches of Bernier, Dorre and Dirk Hartog Islands, and occasionally at the northern tip of Peron Peninsula. Illustration by Philippa Nikulinsky.



Managing Editor: Ron Kawallak
Editor: Ray Bailey
Contributing Editors: Verna Costello, David Gough, Tanyia Maxted and Carolyn Thomson
Design: Sue Marais, Stacey Strickland
Finished art: Sandra Mitchell
Advertising: Estelle de San Miguel ☎ (09) 389 8644 Fax: 389 8296
Illustration: Ian Dickinson, Sandra Mitchell and Stacey Strickland
Cartography: CALM Land Information Branch
Colour separation by Prepress Services
Printed in Western Australia by Lamb Print

© ISSN 0815-4465 All material copyright. No part of the contents of the publication may be reproduced without the consent of the publishers



Published by Dr S Shea, Executive Director
Department of Conservation and Land Management,
50 Hayman Road, Como, Western Australia 6152.