



FOR THE DEGREE

OF

DOCTOR OF DENTAL SCIENCE

BY

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PART I. AN INVESTIGATION ON THE BACTERIOLOGY, PATHOLOGY  
AND TREATMENT OF THE PULPLESS TOOTH.

PART II. AN INVESTIGATION ON THE EFFECT OF DIETARY CHA  
ON THE ORAL TISSUES OF CENTRAL AUSTRALIAN  
ABORIGINALS.

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## INTRODUCTION.

This thesis is based on two independent lines of investigation, the first being designed to provide a satisfactory foundation on which a sound system of treatment can be based.

The method of approach to this problem was the result of fifteen years of private practice during which the candidate took a special interest in root canal treatment so that when the opportunity presented for research, it was made use of to test the clinical methods used and to modify them to produce better results.

As the problem of the pulpless tooth was related to the presence within it of bacteria, the first step was to ascertain the bacterial flora. The most effective and permanent method of eliminating the pulpless tooth as a source of infection presented the next problem. It was considered that in view of the difficulty of carrying out techniques associated with root canal therapy that a rational and simple technique suitable for Final Year students would be very suitable for graduates. Over a period of five years this system of treatment has been tested and found satisfactory and one of the most outstanding features has been lack of complications during treatment.

The second investigation has been related to the incidence of dental disease in a primitive people undergoing changes in food habits. Special interest has been taken in the relative value of the chemical and physical nature of the diet in determining the incidence of dental caries.

These investigations have been based on examinations carried out during five expeditions to Central Australia by the candidate.

The examinations have been conducted with great care with facilities as good as is possible under field conditions. The candidate has been carrying out detailed examinations of patients in conjunction with radiographs for twenty five years, twelve years of which have been in connection with the re-examination of patients and the re-checking of students examination charts. This he claims has developed accuracy in assessment of oral disease.

The greater part of the above work has been published and reprints of the papers are included as part of the thesis. Unpublished sections contain additional data and in some cases re-assessment in the light of further data.

It is intended that the papers be read before the type written sections. Some photographs have been added to Section II to acquaint the reader with the environment in which the subjects of the investigations have lived. Where it was considered that colour was necessary to emphasise details, colour prints have been included.

Certain aspects of the aboriginal dentition such as occlusion, attrition and eruption of the teeth have been and are being investigated by another member of the expeditions. Publications by this member have been quoted in the thesis.

P A R T I.

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