# **Resource allocation in Eucalpytus**

Ву

# **Courtney Campany**

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy





Hawkesbury Institute for the Environment

2015

# Acknowledgements

I wish to thank Jesus and my mom yo

# **Statement of Authentication**

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

## **Contents**

FI21 OF IMPLE2	V
LIST OF FIGURES	vi
LIST OF ABBREVIATIONS	vii
ABSTRACT	viii
CHAPTER 1 GENERAL INTRODUCTION  BACKGROUND	<b>1</b> 1 1
THESIS OVERVIEW	1
CHAPTER 2 BELOWGROUND SINK LIMITATION ALTERS GROWTH AND CARBON BALANCE OF EUCALYPTUS SEEDLINGS	E 2
ABSTRACT	2
INTRODUCTION	2
MATERIALS AND METHODS	2
RESULTSS	2
DISCUSSION	2
SUPPORTING INFORMATION	2
CHARTER - DARID RECORDER OF MECORINAL COMPLICATIONS TO LIGHT MAN ARMED A	
CHAPTER 3 RAPID RESPONSE OF MESOPHYLL CONDUCTANCE TO LIGHT AVAILABILITY AL	
LOWS SHADE LEAVES TO TAKE ADVANTAGE OF SUNFLECKS	3
ABSTRACT	3
INTRODUCTION	3
MATERIALS AND METHODS	3
RESULTSS	3
DISCUSSION	3
SUPPORTING INFORMATION	3
	_
CHAPTER 1 ELEVATED ATMOSPHERIC CO₂ AND DROUGHT ALTER CARBON ALLOCATION ABOVE BUT NOT BELOWGROUND IN EUCALYPTUS SALIGNA	
	1
ABSTRACT	1
INTRODUCTION	1
MATERIALS AND METHODS	1
RESULTSS	1
DISCUSSION	1
SUPPORTING INFORMATION	1
CHAPTER 1 GENERAL INTRODUCTION	2
BACKGROUND	2
APPENDIX A: SUPPLEMENTARY FIGURES AND TABLES	_
	3
REFERENCES	4

# **LIST OF TABLES**

# **LIST OF FIGURES**

# **LIST OF ABBREVIATIONS**

## **ABSTRACT**

#### **GENERAL INTRODUCTION**

**BACKGROUND** 

LITERATURE REVIEW

**THESIS OVERVIEW** 

# Below-ground sink limitation alters growth and carbon balance of Eucalyptus seedlings

**ABSTRACT** 

**INTRODUCTION** 

**MATERIALS AND METHODS** 

**RESULTS** 

**DISCUSSION** 

**SUPPORTING INFORMATION** 

# Rapid response of mesophyll conductance to light availability allows shade leaves to take advantage of sunflecks

**ABSTRACT** 

**INTRODUCTION** 

**MATERIALS AND METHODS** 

**RESULTS** 

**DISCUSSION** 

**SUPPORTING INFORMATION** 

# Elevated atmospheric CO<sub>2</sub> and drought alter carbon allocation above but not belowground in *Eucalyptus saligna*

**ABSTRACT** 

**INTRODUCTION** 

**MATERIALS AND METHODS** 

**RESULTS** 

**DISCUSSION** 

**SUPPORTING INFORMATION** 

#### **SYNTHESIS AND CONCLUSIONS**

**SYNTHESIS** 

**CONCLUSIONS** 

## **APPENDIX A: SUPPLEMENTARY FIGURES AND TABLES**

# **REFERENCES**