

Aquatic microinvertebrates in Marley and Jibbon lagoons in the Royal National Park

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Introduction

- Little known about the species diversity and ecology of aquatic microinvertebrates in sandy coastal water bodies of the RNP
- This makes difficult when assessing a full conservation value of such environments

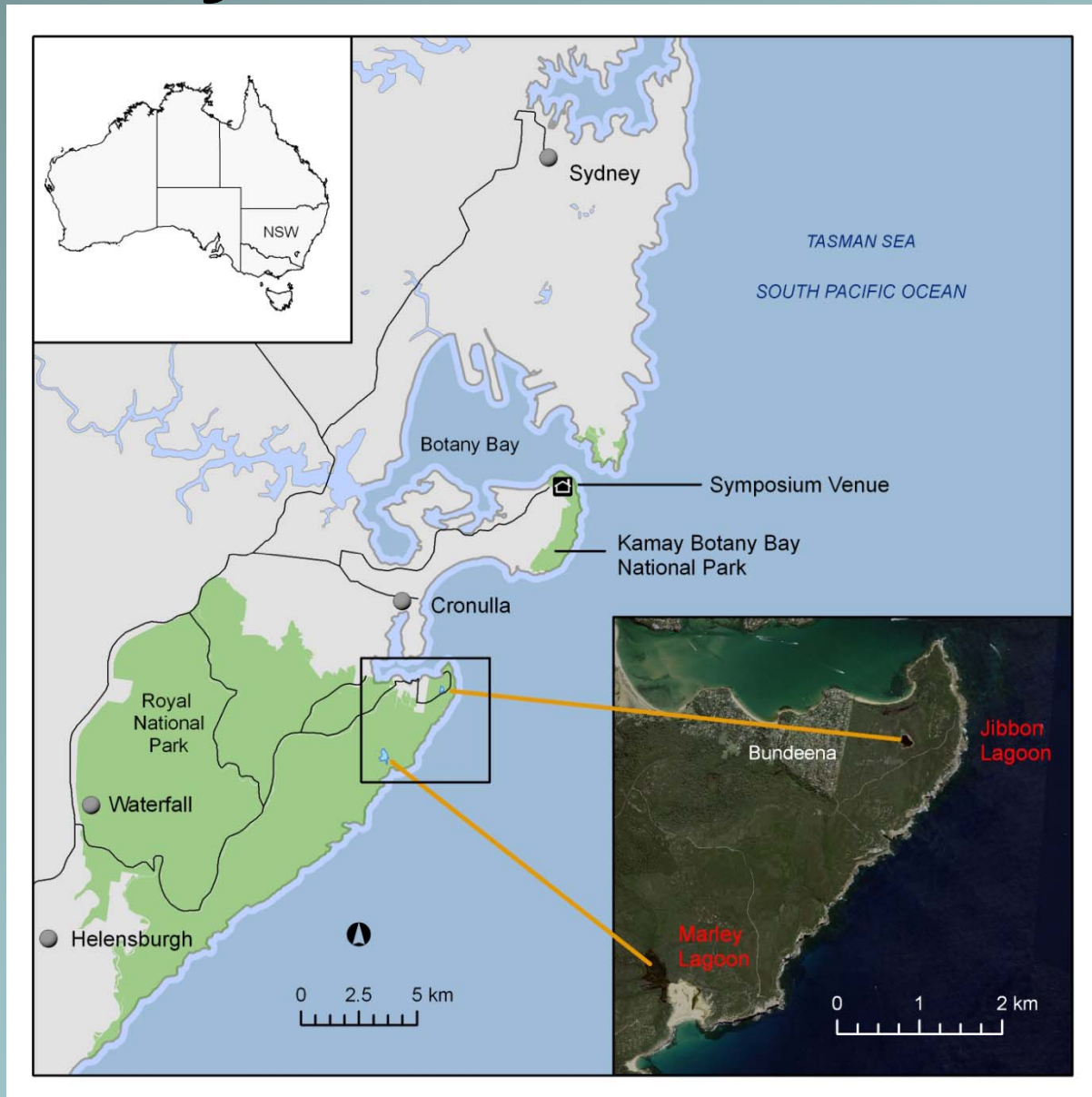


Aims and objectives

To investigate the species diversity and ecology of aquatic microinvertebrates in two closed freshwater lagoons:

- Marley Lagoon: permanent water body
- Jibbon Lagoon: temporary water body

Study areas and sites



Methods

- Field work:
 - Marley lagoon on 31 Aug and 12 Sept 2011
 - Jibbon lagoon on 1 and 12 Sept 2011
- Qualitative tows of plankton nets
- Water quality measurements (water temperature, pH, conductivity and nutrients)
- Microscopic observations and identifications of species

Water quality

	DO (mg/L)	pH	TURB (NTU)	COND (μ S/cm)
Mayley lagoon (entire lagoon basin: about ? ha)	7.38	5.2	1.1	206
Jibbon lagoon (entire lagoon basin: about 3.2 ha)	9.05	6.1	1.6	337

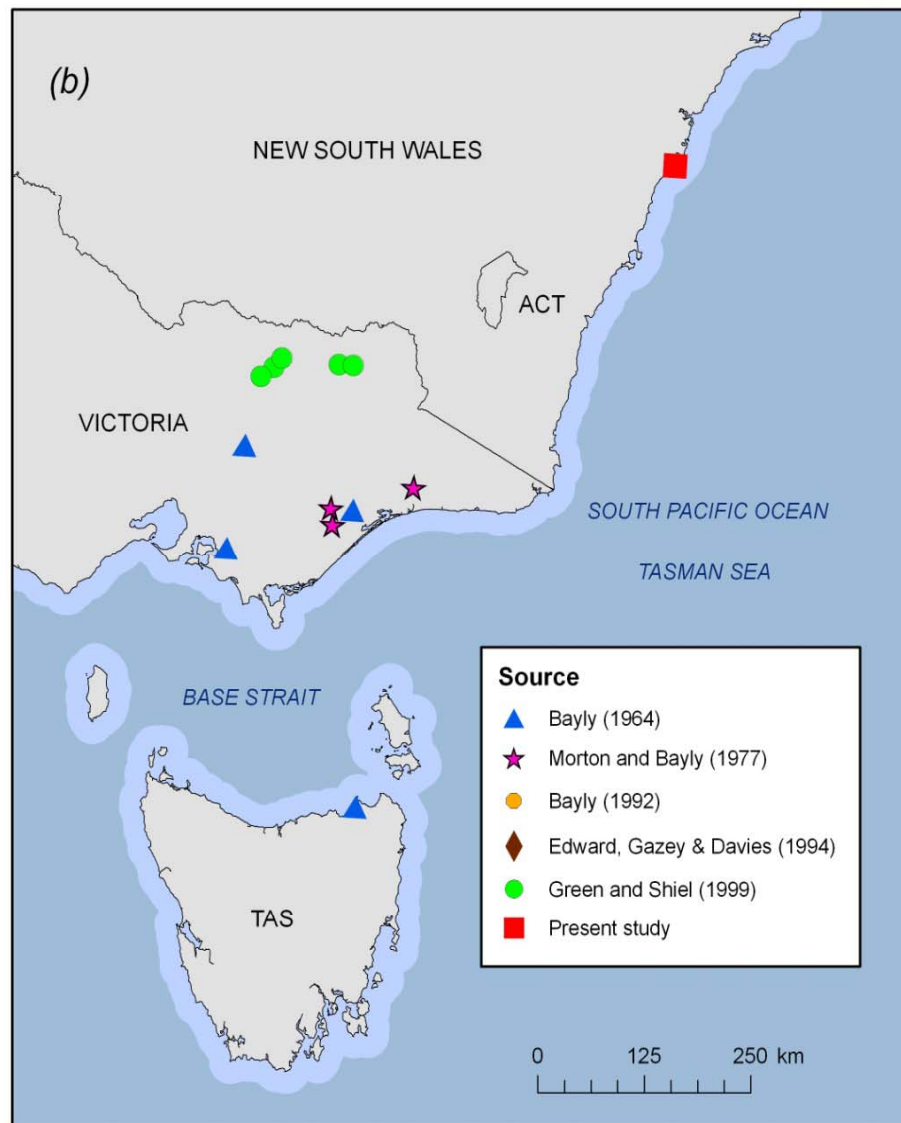
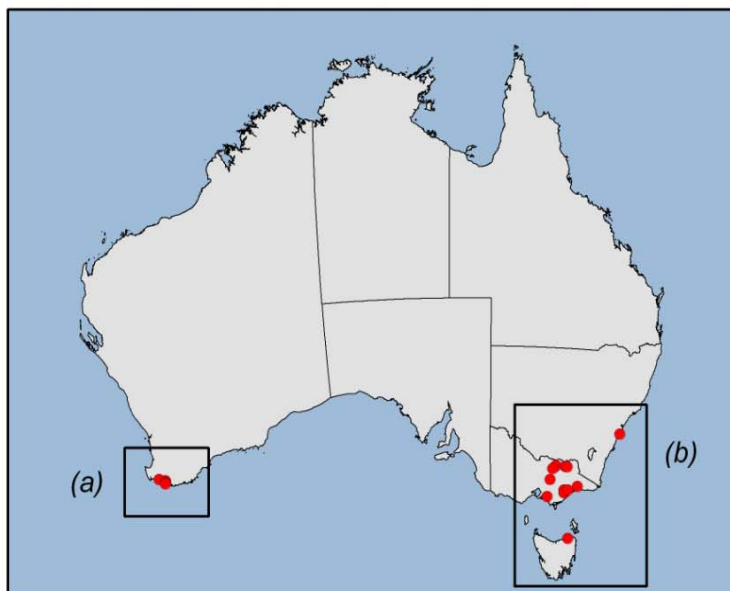
Microinvertebrates

- >12 taxa of microinvertebrates from the Marley and Jibbon lagoons
- Calanoid copepods (Crustacea):
 - Calamoecia tasmanica* in both lagoons
 - * ***Hemiboeckella searli*** in Jibbon lagoon
 - *body size: about 2 mm

Records of *Boeckella searli*

Location	State	Source	Elevation
Jibbon lagoon, Royal National Park	New South Wales	Present study (2011)	3
Big Waterhouse Lake, Tasmania	Tasmania	Bayly (1964)	12
Nyora, Victoria	Victoria	Bayly (1964)	124
Thornton, Victoria	Victoria	Bayly (1964)	252
Fernbank, Victoria	Victoria	Bayly (1964)	85
Pool beside Hume Freeway, 5 km south of Glenrowan	Victoria	Green and Shiel (1999)	176
Pool beside Hume Freeway, Wangaratta	Victoria	Green and Shiel (1999)	156
Pool beside Benalla Road, off Hume Highway	Victoria	Green and Shiel (1999)	178
Pool beside Kiewa Valley Highway, 35 km from Wodonga	Victoria	Green and Shiel (1999)	233
Pool at Hodgkins corner, Mitta Valley Road	Victoria	Green and Shiel (1999)	282
Pool 35	Victoria	Morton and Bayly (1977)	14
Pool 36, 37	Victoria	Morton and Bayly (1977)	47
Pool 41	Victoria	Morton and Bayly (1977)	163
Pool 44,45	Victoria	Morton and Bayly (1977)	14
Pond 3 (6.0 km south of Northcliffe) lay on, and was surrounded by, natural swamp	Western Australia	Bayly (1992)	107
10.8 km south of Northcliffe	Western Australia	Bayly (1992)	88
1.1 km south of Mt Chudalup	Western Australia	Bayly (1992)	63
Lake Smith	Western Australia	Edward, Gazey and Davies (1994)	42

Hemiboeckella searli



Discussion and conclusions

- Presence of species characteristic to coastal dune lakes
- First record of *Hemiboeckella searli* in NSW, representing a significant extension to its known distribution
- High conservation value of coastal water bodies in the Royal National Park

Acknowledgements

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