

# Monitor Measures

## An ecosystem assessment for Lace Monitors

As well as being a fascinating animal, lace monitors are an important connection within the forest ecosystem at Brewongle. During this investigation you will:

- **Collect data on the physical and chemical features of the forest.**
- **Conduct a habitat assessment and make observations about human impacts.**
- **Draw conclusions as to the ability of the forest to support a population of lace monitors.**



### Health and Safety Issues

As you are working out in the field you need to be aware that:

- Ground material is often covered in moss and can be very slippery.
- Vines and dense undergrowth can trip.
- Fallen trees can be rotten and weak.
- Some animals can deliver painful or venomous bites.
- On slopes, rocks can be easily dislodged.



### Outcomes

SC4-6WS: follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually

SC4-7WS: processes and analyses data from a first-hand investigation and secondary sources to identify trends, patterns and relationships, and draw conclusions

**Student Name:** \_\_\_\_\_

## HABITAT ASSESSMENT

Habitat Element						Gully 1	Gully 2	Ridge 1	Ridge 2
<b>TREES</b>	<b>Trees</b>	1- 3 large trees (> 6m) 1	More than 5 large trees 2						
	<b>One or more trees native to Australia</b>	2							
	<b>A variety of 4 or more plant species</b>	2							
	<b>Healthy Tree Canopy /Plant Foliage</b>	Healthy 2	Moderately Healthy 1	Defoliation Evident 0	Evidence of Dieback 0				
<b>SHRUBS</b>	<b>Shrubs</b>	None 0	Some 1	Many 2					
	<b>Native Shrubs</b>	None 0	Some 1	Most 2					
<b>GROUND COVERS</b>	<b>Ground Cover</b>	None 0	Some 1	Most 2					
	<b>Native Grasses or Spreading Plants</b>	2							
<b>SHELTER</b>	<b>Hollows</b>	Butt Hollows 1	Limb Hollows 1	Fallen Log Hollows 1					
	<b>Rocks &amp; Crevices</b>	None 0	Some 1	Most 2					
	<b>Leaf Litter</b>	None 0	Some 1	Most 2					
	<b>Loose Bark (attached or shed)</b>	None 0	Some 1	Most 2					
	<b>Logs &amp; Fallen Branches</b>	None 0	Some 1	Most 2					
<b>WATER</b>	<b>Pond/Water</b>	Yes 1	No 0						
<b>FOOD</b>	<b>Plants with Fruits / Seeds</b>	None 0	Some 1	Most 2					
<b>HABITAT SPACE</b>	<b>Plants of Different Ages</b>	None 0	Some 1	Most 2					
<b>SURROUNDING LANDSCAPE</b>	<b>Joined or Located to Other Gardens / Bush by Gardens / Bush</b>	Yes 1	No 0						

A LOW SCORE WILL INDICATE THE ZONE IS POOR HABITAT. This may be because it has been disturbed or requires additional habitat parameters to better support the amazing variety of living things.

**TOTAL SCORE**  
/ 33

**Lace Monitors require a total habitat assessment score of 18 or above to survive in a forested area.**

# Physical and Chemical Tests

A forest habitat needs to have a healthy balance of minerals and nutrients in the soil to support trees, shrubs, and ground cover. These layers support birds and small mammals which are a part of the lace monitor's diet.

Your task is to establish the health of the forest by testing some of the biotic and abiotic factors.

## Soil quality

	Poor	Average	Healthy	Result
pH level	0 - 3	3 - 4	5 - 8	
Leaf litter depth	0 cm	0.5 - 1cm	1 - 5cm	
Soil temperature	< 4 °C	4 - 7 °C	7 – 28 °C	
Invertebrates	0	1 - 4	5 +	

## Water quality

	Poor	Average	Healthy	Result
pH level	0 – 3	3 – 4	5 - 8	
Salinity	>1000 ppm	>500 ppm	100-500 ppm	
Dissolved oxygen	<2mg/L	2 - 4mg/L	>5mg/L	
Turbidity	>100NTUs	50 - 100NTUs	<50NTUs	

Were any issues identified? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Is the water of an acceptable standard for a lace monitor? \_\_\_\_\_

# Nest Box and Natural Shelter Survey

The lace monitor is an arboreal lizard and is a major predator of nesting birds. For monitors to survive, a diverse range of nests and hollows should be available.

Record your evidence of the presence of animals in Brewongle’s nest boxes below.

Station No.	Animal present	Signs of recent use	Nesting materials	Observation

Did you identify any issues?

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What is your overall assessment of the shelters at Brewongle?

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## Scats and Tracks

*Mammals inhabit every corner of our vast continent, yet the great majority of species are seldom seen. The only clue to their presence might be a footprint left on a muddy track, a scat deposited on a rocky ledge, or bones scattered on a forest floor. Examine the myrtle forest floor for signs of life.*

Sketch the scat or track and then identify the animals present in the forest.



Species:



Species:



Species:



Species:



Species:



Species:

## Results and Conclusion

Refer back to your data collected in the investigations to assist in completing this page.

	Poor	Average	Healthy	Comments
<b>Habitat assessment</b>				
<b>Physical &amp; chemical tests</b>				
<b>Water quality</b>				
<b>Animals present</b>				

Please rate the ability of the forest ecosystem to support a population of Lace Monitors.

Low

Medium

High

Explain the reasons for your conclusion:

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