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Some ecological aspect of cryptocoryne Cordata at Lata Belata  
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LATA BELATAN, TERENGGANU.

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FAKULTI SAINS DAN TEKNOLOGI  
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SOME ECOLOGICAL ASPECT OF *CRYPTOCORYNE CORDATA* GRIFFITH AT  
LATA BELATAN, TERENGGANU.

By

Idayanti Ishak

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: SOME ECOLOGICAL STUDY OF *CRYPTOCORYNE CORDATA* GRIFFITH AT LATA BELATAN, TERENGGANU oleh Idayanti Binti Ishak, no. matrik: UK10463 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains Gunaan (Pengurusan dan Pemuliharaan Biodiversiti), Fakulti Sains dan Teknologi, Universiti Terengganu Malaysia.

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## LIST OF ABBREVIATIONS

SP	-	Subpopulation
PL	-	Plant Length
FW	-	Fresh Weight
LSA	-	Leaf Surface Area
NS	-	Number of Shoot
LP	-	Length of Petiole
LL	-	Leaf Length
SD	-	Stolon Diameter
IL	-	Internode Length
LW	-	Leaf width
USDA	-	United State Department of Agriculture
MPS	-	Multi Parameters System
cm	-	Centimeter
°C	-	Degree Celsius
g	-	Gram
ml	-	Milliliter
TDS	-	Total Dissolve Solid
mm	-	millimeter
DO	-	Dissolve oxygen
pH	-	Potential of hydrogen
mg/L	-	Milligram per Liter
ms <sup>-1</sup>	-	Meter per second
m <sup>2</sup>	-	Meter square

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## ABSTRACT

Some ecological study of *Cryptocoryne cordata* Griffith was conducted at Lata Belatan, Besut, Terengganu in dry (May 11-12, 2006) and wet (September 1-2, 2006) season. They are found recently occupying in small stream and in fresh water swamp area. The difference in habitat conditions might lead to the differences of plant phenological and morphological aspects at the two habitats at Lata Belatan. A total of 166 samples were collected in dry season and 90 samples in wet season. Density in swamp habitat ( $39 \text{ shoot/m}^2$ ) is higher than stream ( $36 \text{ shoot/m}^2$ ) habitat. Some ecological parameters were recorded to understand the relationship with the plant morphology. Plant morphology at stream is greater than plant at swamp, where plant at stream showed average of; plant length is  $23.39 \pm 4.65$  cm, recorded in wet season; plant fresh weight is  $11.41 \pm 6.76$  g, recorded in wet season; 6 to 7 petiole/shoot, recorded in dry season; petiole length is  $9.20 \pm 3.98$  cm, recorded in dry season; leaf surface area is  $91 \pm 68.03$   $\text{cm}^2$ , recorded in dry season; leaf length  $6.9 \pm 1.96$  cm, recorded in dry season; diameter of stolon is  $2.74 \pm 1.63$  mm, recorded in dry season; and length of stolon internode is  $3.37 \pm 1.87$  cm, recorded in dry season. Even swamp plant shows small morphology than plant at stream, but swamp habitat is more stable and suitable ecology for *C. cordata* growth.



# **BEBERAPA ASPEK EKOLOGI KE ATAS *Cryptocoryne cordata* Griffith DI LATA BELATAN, TERENGGANU.**

## **ABSTRAK**

Beberapa kajian mengenai ekologi *Cryptocoryne cordata* Griffith telah dijalankan di Lata Belatan, Besut, Terengganu pada musim kering (11-12 May 2006) dan musim hujan (1-2 September 2006). Tumbuhan ini dijumpai tumbuh di kawasan sungai kecil dan di kawasan paya air tawar. Habitat yang berbeza di Lata Belatan berkemungkinan menyebabkan terdapat perbezaan morfologi dan fenologi tumbuhan ini. Sejumlah 166 sampel telah dikutip pada musim kering dan 90 sampel pada musim hujan. Kepadatan di kawasan paya adalah lebih tinggi ( $39 \text{ pokok/m}^2$ ) berbanding di habitat sungai ( $36 \text{ pokok/m}^2$ ). Beberapa parameter ekologi direkodkan untuk lebih memahami perkaitannya dengan morfologi tumbuhan. Morfologi tumbuhan di kawasan sungai adalah lebih baik berbanding tumbuhan di kawasan paya, di mana pokok di sungai menunjukkan purata bacaan; panjang pokok ialah  $23.39 \pm 4.65 \text{ cm}$  yang telah direkodkan pada musim hujan, berat tumbuhan segar ialah  $11.41 \pm 6.76 \text{ g}$  direkodkan pada musim hujan, 6 to 7 petiol/tumbuhan direkodkan pada musim kering, panjang petiol ialah  $9.20 \pm 3.98 \text{ cm}$  yang direkodkan pada musim kering, luas permukaan daun ialah  $91 \pm 68.03 \text{ cm}^2$  direkodkan pada musim kering, panjang daun ialah  $6.9 \pm 1.96 \text{ cm}$  direkodkan pada musim kering, diameter stolon ialah  $2.74 \pm 1.63 \text{ mm}$  direkodkan pada musim kering dan panjang internod pada stolon ialah  $3.37 \pm 1.87 \text{ cm}$  direkodkan pada musim kering. Walaupun tumbuhan di paya lebih kecil morfologinya berbanding tumbuhan di sungai, tetapi habitat paya adalah lebih stabil dan sesuai untuk pertumbuhan *C. cordata*.