


# 生物策略表

類別	生物策略 (Strategy)	
生物策略 STRATEGY	折斷保護分枝 (Branches protect by breaking)	
生物系統 LIVING SYSTEM	鹿角珊瑚 <i>Acropora cervicornis</i> (Staghorn coral)	
功能類別 FUNCTIONS	#Manage Turbulence #應付湍流	
作用機制標題	加勒比海石珊瑚的分枝透過程序性斷裂來保護核心群體 (Branches of Caribbean stony coral protect the core colony by programmed breakage.)	
生物系統/作用機制 示意圖		
作用機制摘要說明 (SUMMARY OF FUNCTIONING MECHANISMS)		
<p>「加勒比海的石珊瑚 (stone coral) <i>Acropora cervicornis</i> 會形成細長的分枝(應力加強的形狀), 並由易碎的骨骼材料所支撐。我們原先預期這些珊瑚會在湍急的水流中折斷, 但我們發現它們在被浪潮沖刷的前礁 (forereef) 上茁壯的成長。鹿角珊瑚的確時常折斷, 但折斷掉下的碎片可以存活並生長。這種「程序性斷裂」(programmed breakage) 和生長似乎是鹿角珊瑚族群進行無性生殖 (asexual reproduction) 和擴散的主要機制。此外, 當一個個體或群落的一小部分斷裂時, 作用於整個結構的水流力量會減小, 因此局部斷裂能避免整體破壞。」(Koehl 1984: 67)</p> <p>“The Caribbean stony coral <i>Acropora cervicornis</i> forms long, slim branches (a stress increasing shape) supported by brittle skeletal material. We can predict that these corals would break in rapid water flow, yet we find that they thrive on wave-swept forereefs. <i>A. cervicornis</i> do often break, but the broken-off pieces survive and grow. Such ‘programmed breakage’ and growth appears to be the main mechanism of asexual reproduction and dispersal of <i>A. cervicornis</i> colonies... Furthermore, when bits of an organism or colony break off, the flow forces on the whole structure can be reduced, hence partial breakage can prevent total destruction.” (Koehl 1984: 67)</p>		
文獻引用 (REFERENCES)		
參考文獻清單與連結 (REFERENCE LIST)		

Koehl, M. A. R. (2007). How Do Benthic Organisms Withstand Moving Water? *American Zoologist* 24: 57-70. (<https://doi.org/10.1093/icb/24.1.57>)

延伸閱讀: **Harvard** 或 **APA** 格式 (取自 **AskNature** 原文; 若為翻譯者補充, 請註明)

生物系統延伸閱讀資訊連結 (LEARN MORE ABOUT THE LIVING SYSTEM/S)

<https://asknature.org/system/coral-and-sea-anemones?post-type=Biological%20Strategies>

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<https://asknature.org/strategy/branches-protect-by-breaking/>