

生物策略表

類別	生物策略 (Strategy)
生物策略 STRATEGY	魚鰭提供流線型外形 (Fins provide streamlined shape)
生物系統 LIVING SYSTEM	南方黑鮪 <i>Thunnus maccoyii</i> (Southern bluefin tuna)
功能類別 FUNCTIONS	#應付亂流 #改變大小/形狀/質量/體積 #在液體中/上移動 #Manage turbulence #Modify size/shape/mass/volume #Move in/on liquids
作用機制標題	遠洋魚類如鮪魚的魚鰭是流線型的，因為它們在不需要使用的時候緊貼著身體的凹陷和溝槽 (Fins of ocean-going fish such as tuna are streamlined because they fit close to the body in depressions and grooves when not needed)
生物系統/作用機制 示意圖	
作用機制摘要說明 (SUMMARY OF FUNCTIONING MECHANISMS)	
文獻引用 (REFERENCES)	
<p>[關於高速遠洋魚類如鮪魚 (tuna)、鰹魚 (bonito)、旗魚 (marlin) 和鯖魚 (mackerel)] 「胸鰭和腹鰭以及背脊對推進力沒有任何作用。它們只具有方向舵、穩定器或剎車的作用。當魚以高速移動時，它們不需要被使用而被夾在魚體的兩側，與表面的凹槽完全吻合。在尾巴的兩邊，沿著身體的頂部和底部邊緣，是微小的三角形鰭片，能充當擾流器 (spoiler) 以防止亂流。」 (Attenborough 1979: 120)</p> <p>[Referring to high-speed ocean-going fish such as tuna, bonito, marlin, and mackerel] "The pectoral and pelvic fins and the dorsal along the crest of the back play no part in propulsion. They serve only as rudders, stabilisers or brakes. When the fish is moving at speed and they are not required they are clamped to the fish's side, fitting exactly into depressions and grooves on the surface. And along the top and bottom edge of the body, on either side of the tail, are tiny triangular blades that serve as spoilers to prevent turbulence." (Attenborough 1979: 120)</p>	
參考文獻清單與連結 (REFERENCE LIST)	
Attenborough, D. (1981). <i>Life on earth: a natural history</i> . London: Collins.	
延伸閱讀: Harvard 或 APA 格式	

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

https://en.wikipedia.org/wiki/thunnus_maccoyii

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AskNature 原文連結

<https://asknature.org/strategy/fins-provide-streamlined-shape/>