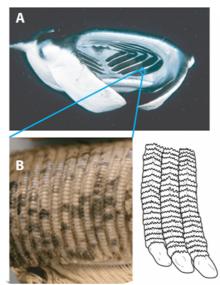
# 生物策略表

類別	生物策略 (Strategy)
生物策略	過濾系統可抵抗堵塞(巨型蝠鱝)
STRATEGY	(Filtration System Is Resistant to Clogging Giant manta ray)
生物系統	巨型蝠鱝 (Giant manta ray)
LIVING SYSTEM	E 至珊鵙 (Giant manta ray)
功能類別	#捕獲、吸收或過濾固體
FUNCTIONS	#Capture, Absorb, or Filter Solids
作用機制標題	獨特的過濾系統使蝠鱝能夠捕獲小顆粒而不會堵塞。
	(Unique filtration system allows manta rays to capture small particles
	without clogging.)
少hh & 依/ 佐田 幽	_

# 生物系統/作用機制示意圖

(確認版權、註明出處; 畫質)



https://asknature.org/strategy/filtration-system-is-resistant-to-clogging/

## 作用機制摘要說明 (SUMMARY OF FUNCTIONING MECHANISMS)

蝠鱝的過濾系統具有極強的抗堵塞能力,並且可以在非常高的流速下運作。它是如何做到的?蝠鱝利用葉狀裂片陣列將食物顆粒彈離過濾器。流過葉的水會產生電流流動的複雜模式,流動中的食物顆粒撞擊葉辦並移除。這使得魚能夠保留通常甚至比毛孔還小的食物顆粒。從過濾器彈回的顆粒集中在口腔中空腔,讓魚可以吞下它們。

#### 文獻引用 (REFERENCES)

The manta ray's filtration system is extremely resistant to clogging and can operate at very high flow rates. How does it do it? Manta rays use arrays of leaf-like lobes to bounce food particles away from the filter. Water passing over the lobes creates a complex pattern of current flow, and food particles in the flow hit the lobes and move away. This allows the fish to retain food particles that are oftentimes even smaller than the pores. The particles that ricochet off the filter become concentrated in the mouth cavity, allowing the fish to ingest them.

#### 參考文獻清單與連結 (REFERENCE LIST) Harvard 或 APA 格式

https://asknature.org/strategy/filtration-system-is-resistant-to-clogging/

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

Fish

Class Agnatha ("without jaws"), Class Chondrichthyes ("cartilage fish"), Superclass Osteichthyes ("bone fish"): Sharks, eels, snapper, hagfish

The fish are a diverse group, comprising multiple classes within Phylum Animalia. The most well-known classes are Chondrichthyes, which has sharks and rays, and superclass Osteichthyes, which has all bony fish like cod and tuna. Unlike other vertebrates, fish only live in water. They use special adaptations like fins, gills, and swim bladders to survive. Most are ectothermic, meaning their body temperature depends on the water temperature around them. Over half of all vertebrates are fish. They're found from the bottom of the sea to high mountain lakes.

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

 $\label{logical} $$ $$ https://asknature.org/?s=&p=0&hFR\%5Bpost\_type\_label\%5D\%5B0\%5D=Biological\%20Strategies&hFR\%5Btaxonomies\_hierarchical.system.lvl0\%5D\%5B0\%5D=Animals\%20\%3E\%20Vertebrates\%20\%28Mammals\%2C\%20Fish%2C\%20Birds\%2C\%20Reptiles\%29\%20%3E\%20Fish$ 

撰寫/翻譯/編修者與日期

陳立心 (2024/03/26); 陳柏宇編修 (2024/11/30)

AskNature 原文連結

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