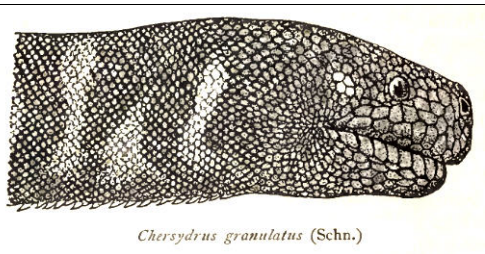
生物策略表

類別	生物策略 (Strategy)
生物策略 STRATEGY	皮膚保護免於脫水 (Skin protects from dehydration)
生物系統 LIVING SYSTEM	瘭鱗蛇 *Acrochordus granulatus* (Arafura file snake)
功能類別 FUNCTIONS	#獲取、吸收、或過濾液體 #保護免受液體流失危害 #Capture, absorb, or filter liquids # Protect from loss of liquids
作用機制標題	瘭鱗蛇的皮膚因其吸濕性，可吸收空氣中的水分，而保護免於脫水 (The skin of file snakes protects from dehydration because it is hygroscopic, absorbing moisture from the air.)
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)

「瘭鱗蛇的顆粒狀 (granular) 皮膚具吸濕性 (hygroscopic)，可吸收由鱗片間通道快速通過體表的水分。因此，此外皮極易吸附水分，並於皮膚表面形成每平方公分 5.4 毫克水分的表層水膜 (superficial aqueous film)。雖然瘭鱗蛇是水生的 (aquatic)，牠們仍可能被困在變乾的暫時性水塘，也曾被發現在潮汐泥灘上，有曝露於高溫及脫水的潛在風險。因此，當牠們在水域間移動而延長在陸地的逗留時間時，表層水膜在減少皮膚或身體脫水方面，有著潛在性的重要生物角色。」(Lillywhite and Sanmartino 1993: 99)

"The granular skin of *Acrochordus* is hygroscopic and imbibes water which moves rapidly over the body surface through interscalar channels. Consequently, the integument is easily wetted to bear a superficial aqueous film = 5.4 mg water per cm^2 of skin surface. Although file snakes are aquatic, they can become entrapped in drying ephemeral pools and have been observed on tidal mud flats where they are potentially exposed to intense heat and dehydration. Superficial water films, therefore, have a potentially important biological role in reducing dehydration of skin or body while extending the time available for terrestrial sojourns between areas of water." (Lillywhite and Sanmartino 1993: 99)

參考文獻清單與連結 (REFERENCE LIST)

Lillywhite, H. B., V. Sanmartino. (2006). Permeability and water relations of hygroscopic skin of the file snake, *Acrochordus granulatus*. *Copeia* 1: 99-103. https://www.jstor.org/stable/1446299?origin=crossref&seq=1#metadata_info_tab_contents

延伸閱讀

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

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

撰寫/翻譯/編修者與日期

潘姿甄翻譯 (2019/04/22)；譚國鎏編修 (2020/04/17)；紀凱容編修 (2020/11/26)；施習德編修 (2020/12/26)

AskNature 原文連結

https://asknature.org/strategy/skin-protects-from-dehydration/