

生物策略表

類別	生物策略 (Strategy)	
生物策略 STRATEGY	絨毛提供隔熱 (Underhairs provide insulation)	
生物系統 LIVING SYSTEM	美麗諾綿羊 <i>Ovis aries</i> (Merino sheep)	
功能類別 FUNCTIONS	#獲取、吸收、或過濾氣體 #維持體內平衡 #保護免受溫度危害 #Capture, absorb, or filter gases # Maintain homeostasis #Protect from temperature	
作用機制標題	美利諾綿羊的羊毛透過絨毛產生數百個攔取空氣的氣囊，因而形成一隔熱層 (The wool of Merino sheep forms an insulating layer via underhair that creates hundreds of trapped air pockets.)	
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>「通常像綿羊的羊毛般，緻密絨毛的外層可有效地調節溫度，因為毛髮中夾帶了數百個微小的氣囊，可在在動物與外在的氣候之間形成一隔熱層。如同澳洲的美麗諾綿羊 (merino) 的厚羊毛，可以在寒冷的天氣保持溫暖，相反的，在炎熱的夏天也能保持涼爽。在兩種情況下，皮膚和羊毛表面 (8 cm 差距) 的溫差可達 40°C 或更高。皮毛厚度較薄的動物中，藉由豎起毛髮即可增強對於寒冷的抵抗力。」(Foy and Oxford Scientific Films 1982: 84)</p> <p>“Generally a dense coat of underhairs, as in the wool of a sheep, is particularly effective in temperature control, because hundreds of tiny air pockets become trapped among the hairs and make an insulating layer between animal and climate. Sheep with thick wool, such as the merinos of Australia, can stay warm in freezing weather and, conversely, stay cool in the heat of summer. In both cases the difference between the temperature at the skin and on the wool surface (a distance of 8 cm) may be 40°C or more. In animals with less thick coats, simply erecting the hair increases the resistance to cold.” (Foy and Oxford Scientific Films 1982: 84)</p>		

參考文獻清單與連結 (REFERENCE LIST)

Foy, S. (1983). *The grand design: Form and colour in animals*. Prentice-Hall.

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/Ovis_aries

撰寫/翻譯/編修者與日期

許咨璇翻譯 (2019/04/22)；譚國鎔編修 (2020/04/16)；施習德編修 (2020/12/15)

AskNature 原文連結

<https://asknature.org/strategy/underhairs-provide-insulation/>