

# 生物策略表

類別	生物策略 (Strategy)
生物策略 STRATEGY	絨羽的隔熱作用 (Down feathers insulate)
生物系統 LIVING SYSTEM	王絨鴨 <i>Somateria spectabilis</i> (King eider)
功能類別 FUNCTIONS	#保護免受溫度危害 #Protect from temperature
作用機制標題	由於缺乏小羽枝和蓬鬆能力，絨鴨的絨羽提供了隔熱 (The down feathers of eider ducks provide insulation due to lack of barbules and ability to fluff.)
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>「絨羽細小，具有短軸，但缺乏小羽枝 (barbule)，因此羽枝 (barb) 間不會互相勾纏，而是住不同方向蓬鬆伸展。絨羽也可以壓縮至小空間，並可重新膨脹到原來的蓬鬆度。絨羽是小禽鳥和離鳥的覆蓋物，可提供極佳的保暖作用，人們用羽絨被子就可以感受到了。絨鴨絨羽就變成最佳品質絨羽的同義字。當斯堪地那維亞半島 (Scandinavia) 的寒冷春天到來時，雌性絨鴨會將胸部廓羽下的厚絨羽成簇地拔下，並鋪成厚厚一層，作為鳥巢的保</p>	

暖物料。絨羽非常的輕巧，這使它成為理想的禦寒衣物和裝備：羽絨衣和睡袋徹底改革了登山和極地探險。」(Foy and Oxford Scientific Films 1982: 109)

「世界上最溫暖的鳥巢之一，就是以雌性絨鴨胸部柔軟絨羽所鋪成的鳥巢。絨鴨棲息在北極苔原覆蓋的島嶼上，所以牠們發展出已知最保暖的絨羽並不令人訝異。當牠們孵化時，小鴨就已經有自己的羽絨外套了。」(Foy and Oxford Scientific Films 1982: 111)

“The down feathers are small, with a short shaft and no hooked barbules, so the barbs to not interlock but fluff out in different directions. They can also be packed into a small space and re-expand afterwards to their original fluffiness. Down is the covering of small chicks and other nestlings, and provides excellent insulation, as anyone with a down-filled quilt can testify. The down of the eider duck has become synonymous with the best type of quilt. When the female eider duck nests in the cold springtime of its home in Scandinavia, she pulls tufts of thick down from beneath the contour feathers on her breast, and uses the down to make a thick, warm lining for her nest...Down is extremely light, making it ideal for cold-climate clothing and equipment: down-filled suits and sleeping bags have revolutionized mountaineering and polar exploration.” (Foy and Oxford Scientific Films 1982: 109)

“One of the warmest nests in the world, the eider duck’s nest is lined with soft down from the female eider duck’s breast. Eider ducks nest on tundra-covered islands in the arctic, so it is not surprising that they have developed the warmest known down. When they hatch, the chicks already have their own eiderdown coats.” (Foy and Oxford Scientific Films 1982: 111)

#### 參考文獻清單與連結 (REFERENCE LIST)

S. Foy. (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/King\\_eider](https://en.wikipedia.org/wiki/King_eider)

#### 撰寫/翻譯/編修者與日期

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#### AskNature 原文連結

<https://asknature.org/strategy/down-feathers-insulate/>