生物策略表

類別	生物策略 (Strategy)
生物策略 STRATEGY	迅速改變位置的腺毛 (Hairs change position quickly)
生物系統 LIVING SYSTEM	圓葉毛氈苔 *Drosera rotundifolia* (Round-leaved Sundew)
功能類別 FUNCTIONS	#改變位置 #Modify position
作用機制標題	毛氈苔葉片上的黏性腺毛因觸感改變位置，是透過快速分化的細胞生長 (Sticky hairs on the leaves of sundews change position in response to touch via expedient differential cell growth.)
生物系統/作用機制示意圖	 Source: https://en.wikipedia.org/wiki/File:Drosera_rotundifolia_leaf1.jpg
作用機制摘要說明 (SUMMARY OF FUNCTIONING MECHANISMS)	
文獻引用 (REFERENCES)	
「然而，部分的葉片轉變為主動性的陷阱。毛氈苔生長在歐洲的沼澤或濕地中。這個科中四分之三的物種生活在澳洲…所有的葉片邊緣都包覆著腺毛，可達半英吋長。天氣不太乾燥時，每一根腺毛的頂端會帶有一顆閃亮而黏稠的水珠…昆蟲同樣也會覺得這些很有吸引力，儘管事實上這些葉片並沒有有作為誘餌的蜜露，昆蟲還是被誘惑了。當昆蟲降落時，無法避免地會被腺毛黏住。而隨著牠掙扎，牠會碰到其它腺毛而變得更難脫身。鄰近的腺毛即使並沒有被觸碰到，亦能感覺到捕捉到獵物而向其彎曲。如果這是一隻巨大的昆蟲而且黏在葉片的一邊，腺毛更會靠攏而運送獵獲物往中心點。在那裡，一大群的腺毛會把牠拱起。閃閃發亮的水珠所含的不只黏膠，也有消化液，在隨後開始分解昆蟲的身體。然後腺毛開吸收受害者的所含物質。如果捕獲到的昆蟲特別巨大，整片葉子可能會捲起以包圍牠然後完成整個過程。」 「這些腺毛運動是由其中一側快速分化生長的細胞所達成。一旦啟動，這個過程會以驚奇的速度進行。朝外的腺毛能夠在一分鐘內彎曲 180 度直到指向內側。」(Attenborough 1995: 81-83)	

"A few leaves, however, have been turned into active traps. Sundews grow in European bogs and marshes. Three-quarters of the family live in western Australia…The leaves of all are covered with hairs that on the outer margins may be half an inch long. Each of them, provided that the weather is not too dry, carries on its tip a glistening sticky bead…Insects too must find them attractive, for in spite of the fact that these leaves carry no enticements of nectar, insects are drawn to them. When one alights, it inevitably sticks to a hair. As it struggles, it touches other hairs and becomes further entangled. Neighbouring hairs, even if they have not been touched, are able to sense that a catch has been made and they bend towards it. If the insect is a large one and has been caught near the edge of the leaf, the hairs will lean over and convey the captive towards the centre. There, a whole group of hairs arch over it. The glistening beads contain not only glue but a digestive fluid that soon begins to dissolve the insect's body. The hairs then start to absorb their victim's substance. If the captured insect is particularly large, the whole leaf may fold to enclose it and complete the process."

"These movements of the hairs are achieved by a swift differential growth of the cells of one side. Once initiated, this proceeds at an extraordinary speed. An outward pointing hair can turn through 180 degrees to point inwards in less than a minute." (Attenborough 1995: 81-83)

參考文獻清單與連結 (REFERENCE LIST)

Attenborough, D. (1995). *The private life of plants.* Princeton University Press.

延伸閱讀

https://www.youtube.com/watch?v=X7nWuxPj6PQ
（譚國鎏提供）

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

https://en.wikipedia.org/wiki/drosera
https://www.onezoom.org/life/@drosera
https://eol.org/pages/593301

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https://asknature.org/strategy/hairs-change-position-quickly/