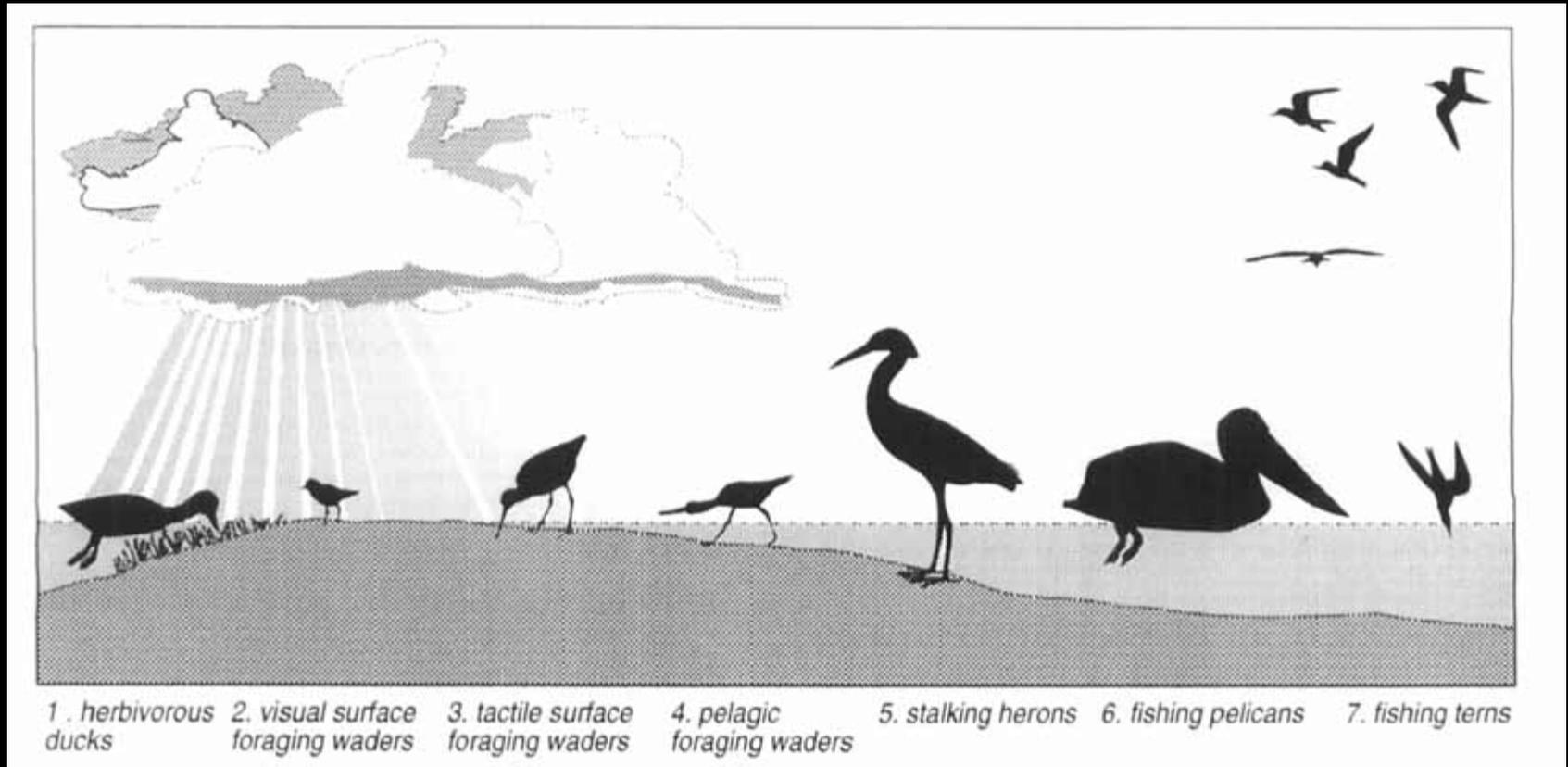




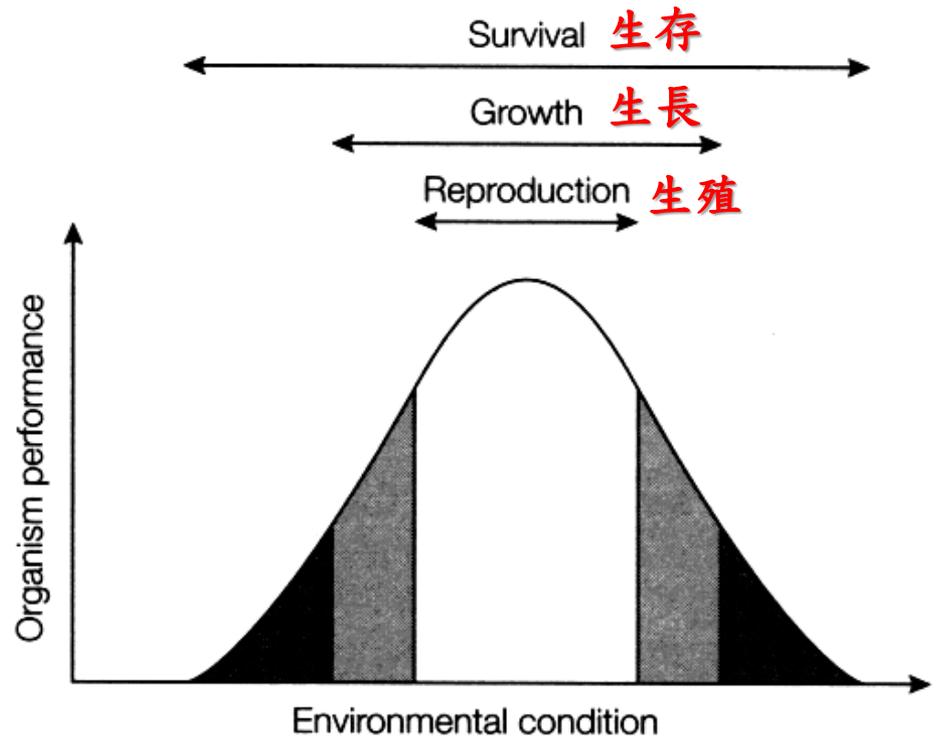
光電與水鳥共生因應對策

鳥的棲地需求不一



生物耐受法則 (Law of tolerance)

生物表現



環境條件

發育速率

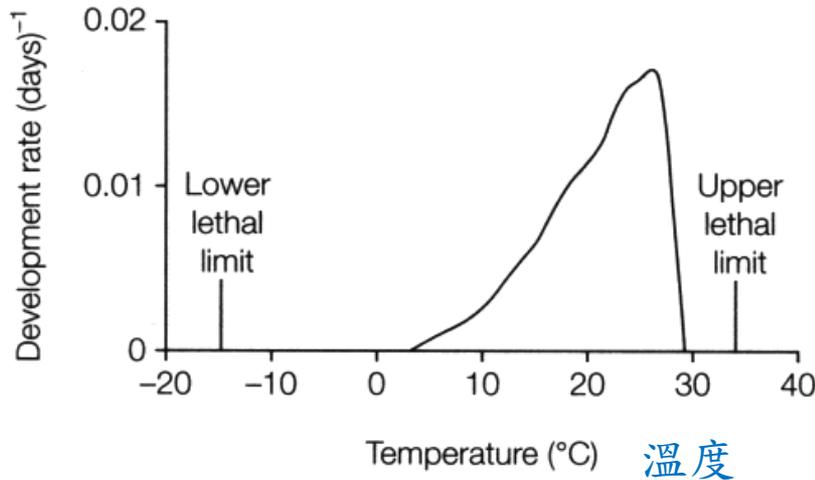
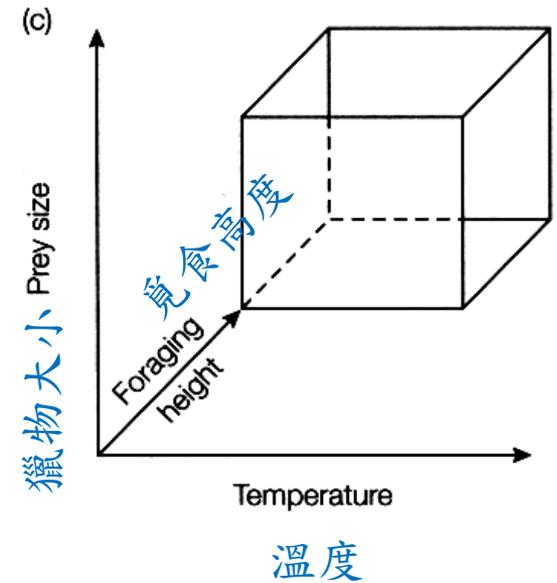
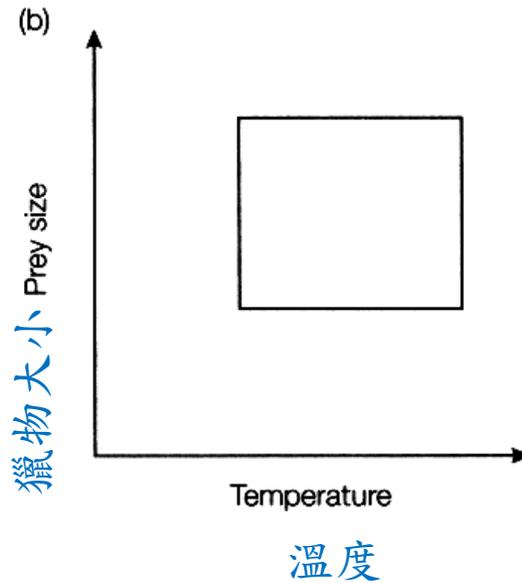
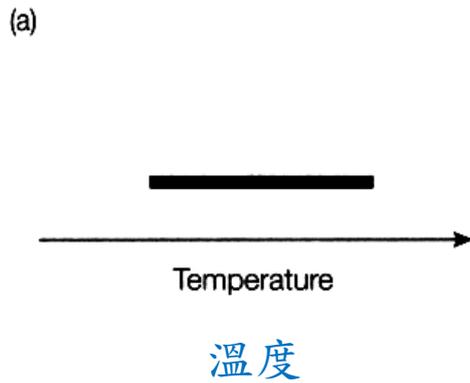
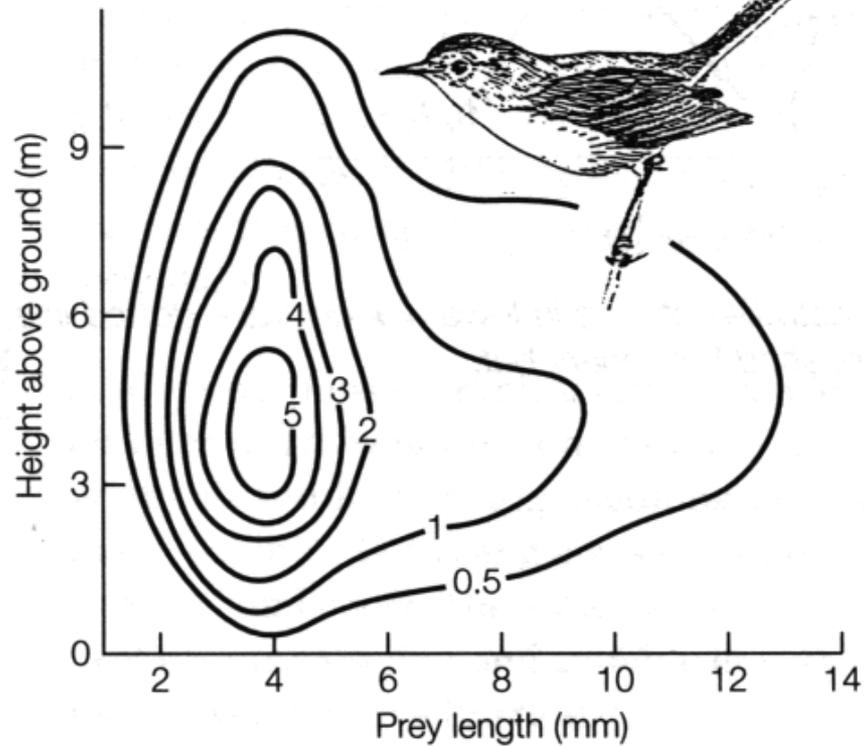


Fig. 3. Development rate and survival in response to temperature in the Tasmanian spider beetle, *Ptinus tectus*. Survival is possible over a wider range of temperatures compared to growth.

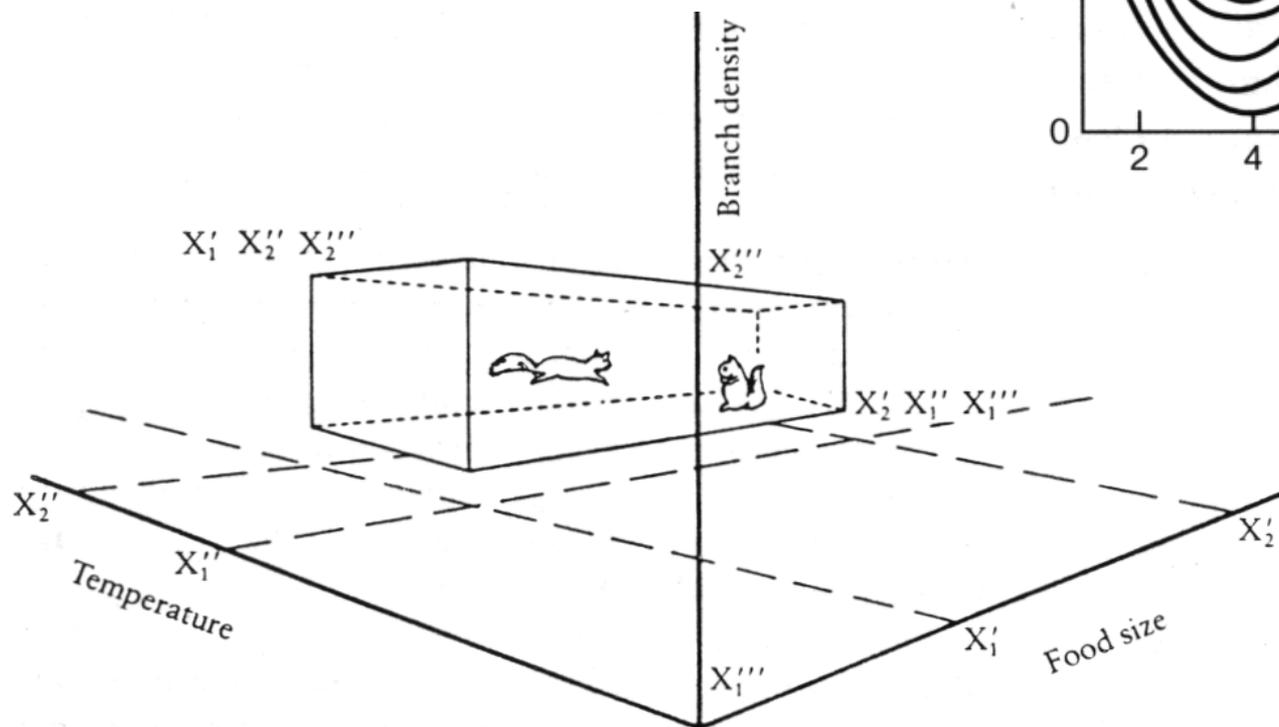
生態區位的概念 (The Concept of Niche)



覓食高度

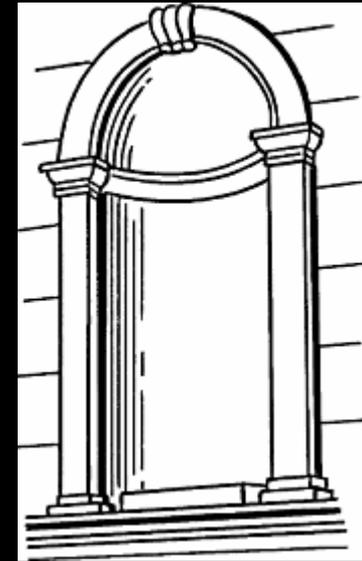


獵物大小



甚麼是生態區位 niche

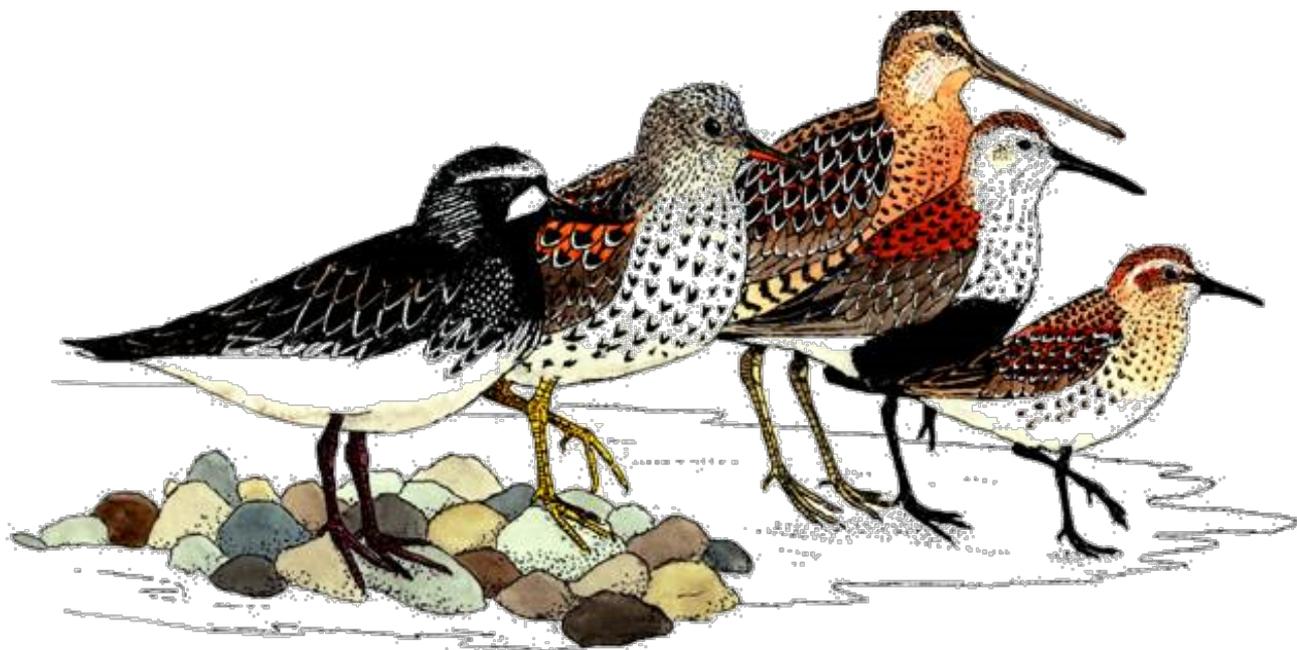
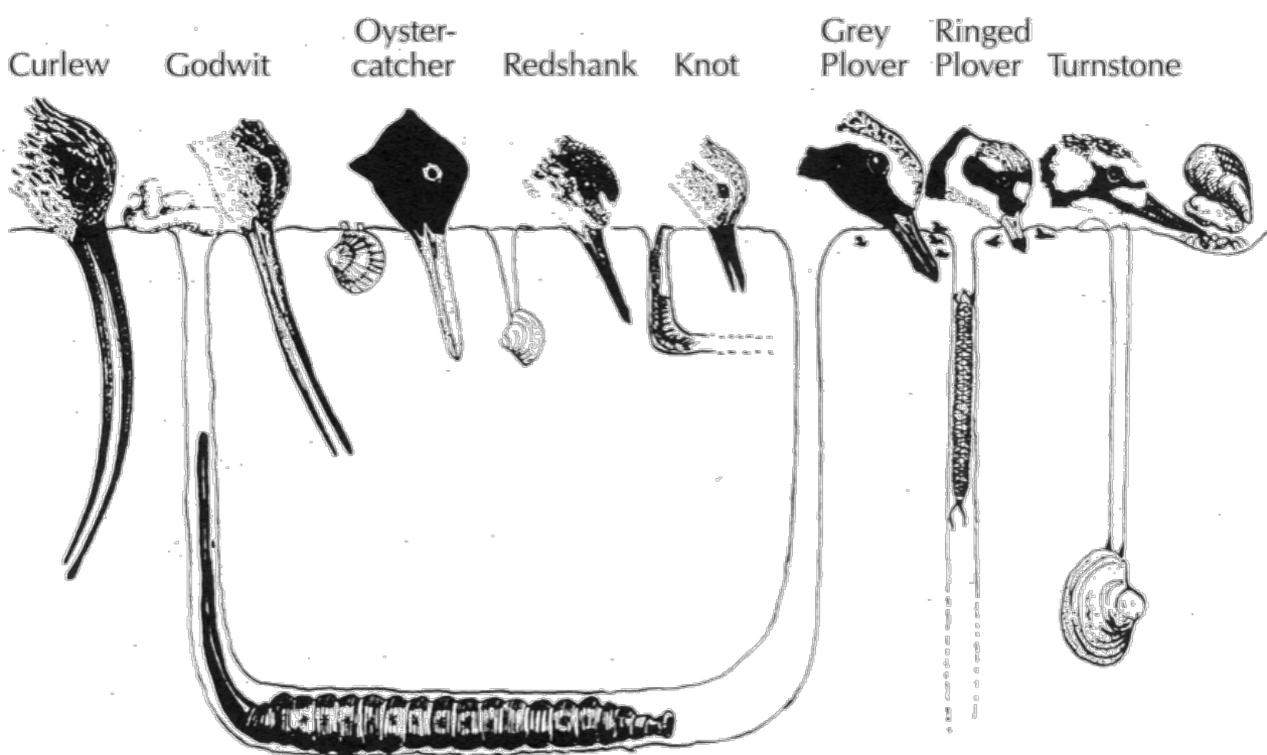
- 牆上的一個凹槽，專門用於放置雕像
- 特定植物或動物生存所需的一切環境及資源



生態同功群：
利用資源類別與方式
相近之物種

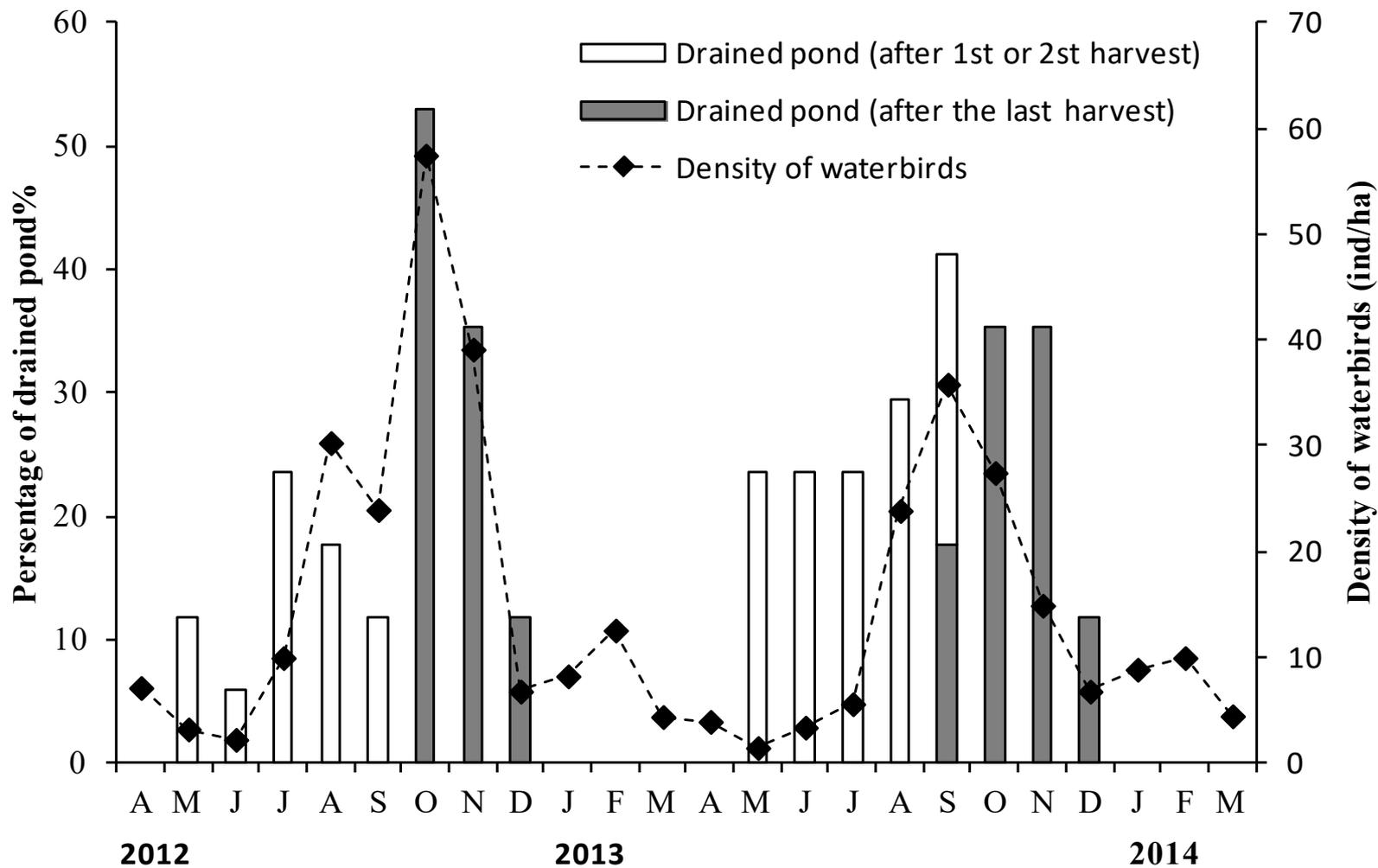
也就是生態區位相近
物種的集合

⇒ 以生態同功群角度
思考棲地營造

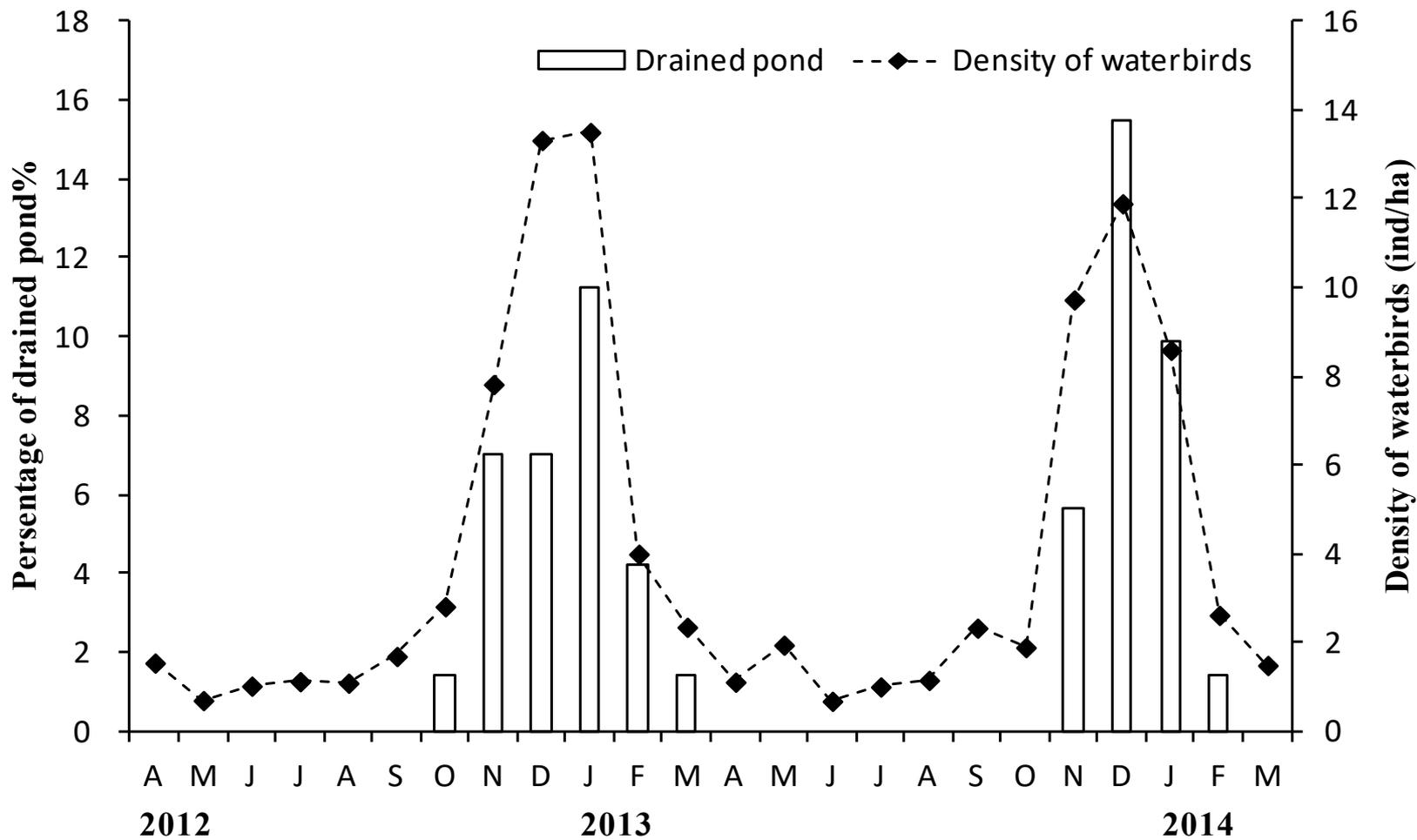


曬池營造水鳥棲地





虱目魚吋苗池樣區中水鳥密度與晒池魚塭比例之月分變化



文蛤池樣區中水鳥密度與晒池魚塭比例之月分變化

瞭解背景資訊

⇒ 了解養殖物種的曬池需求：烏魚、虱目魚、文蛤…的曬池需求不同

⇒ 案場以哪一類同功群為主？泥灘涉禽、淺水涉禽或深水涉禽？

⇒ 曬池時，水位降到該類群水鳥的適當水深時，維持一段時日

Common Caribbean Shorebirds: ID Guide



Large Shorebirds

- Whimbrel 17.5" 44.5 cm
- American Oystercatcher 17.5" 44.5 cm
- Willet 15" 38 cm
- Greater Yellowlegs 14" 35.5 cm
- American Avocet* 18" 46 cm
- Black-necked Stilt* 14" 35.5 cm

Medium Shorebirds

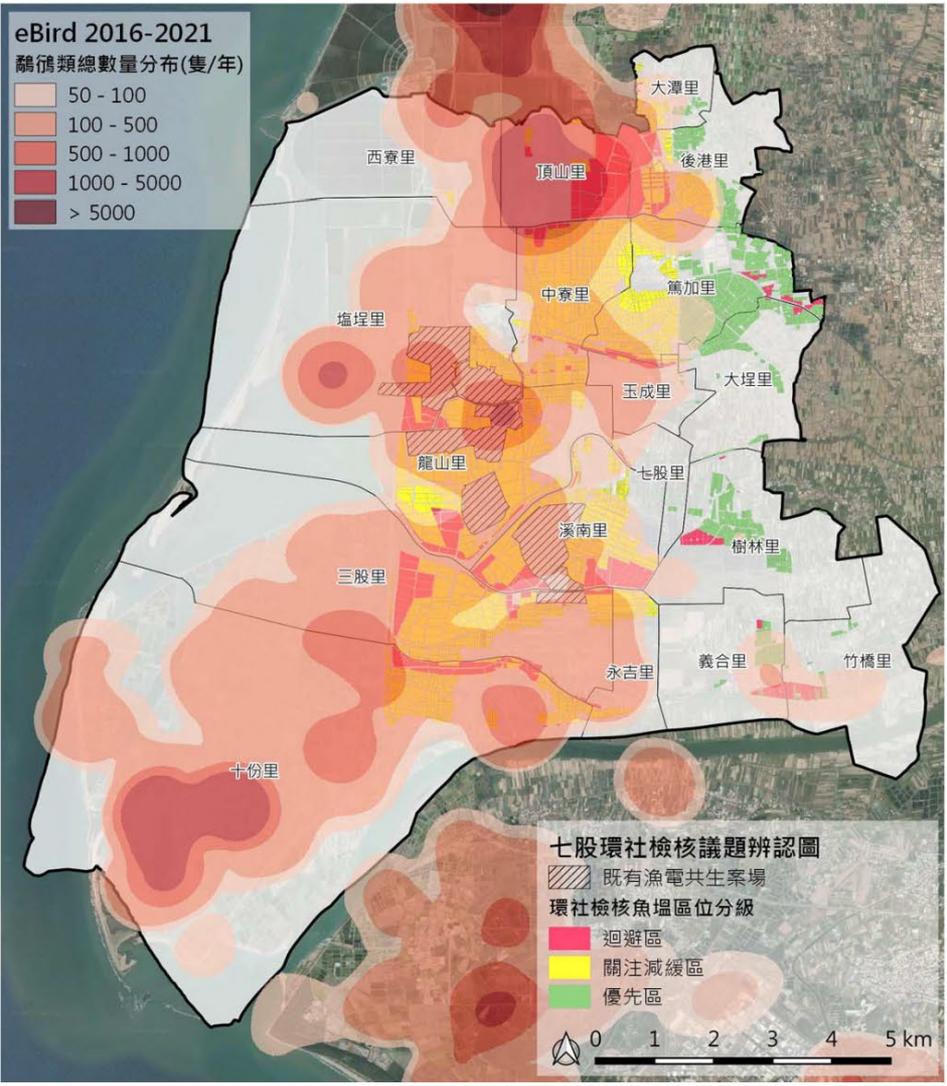
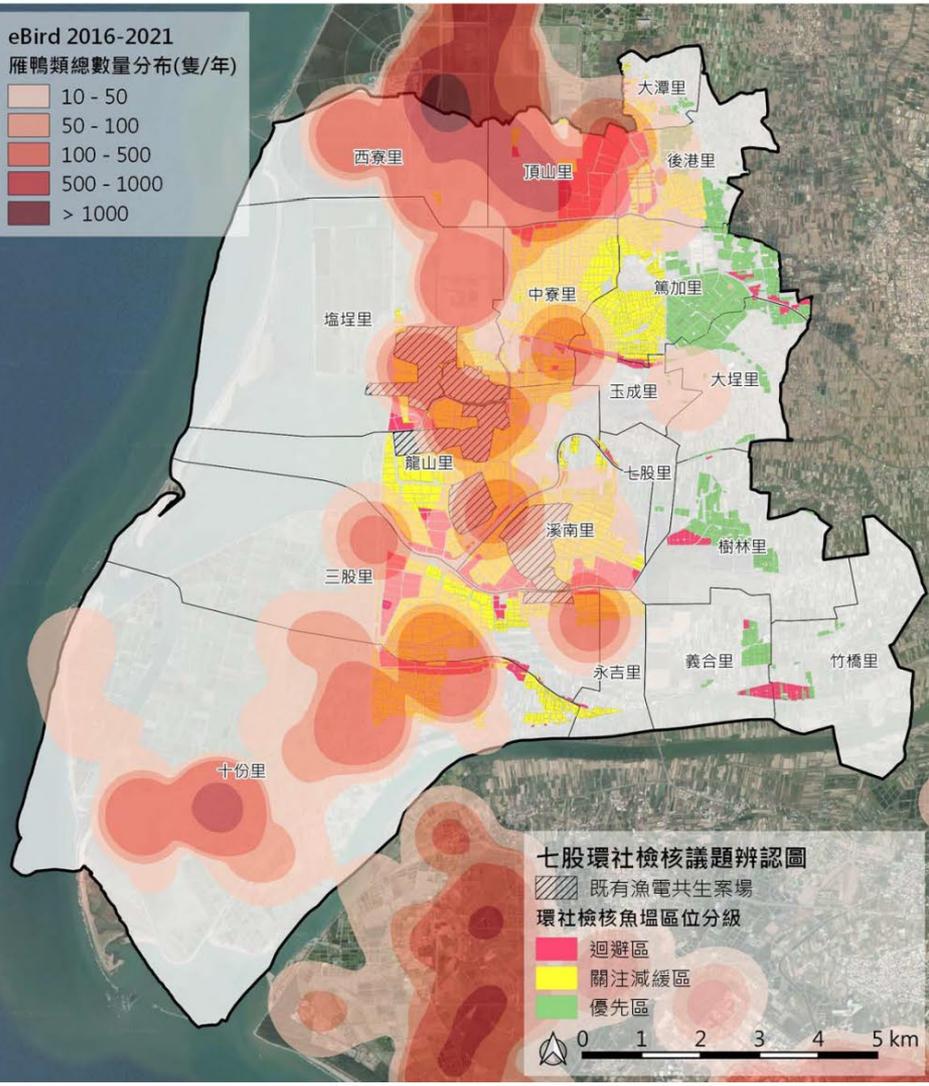
- Lesser Yellowlegs 9.5" 24 cm
- Black-bellied Plover 11.5" 29 cm
- Short-billed Dowitcher 11" 28 cm
- Ruddy Turnstone 9.5" 24 cm
- Red Knot 10.5" 26.5 cm
- Pectoral Sandpiper 8.5" 21.5 cm
- Killdeer* 10.5" 26.5 cm
- Stilt Sandpiper* 8.5" 21.5 cm
- Solitary Sandpiper* 8.5" 21.5 cm

Small Shorebirds

- Wilson's Plover 7.75" 19.5 cm
- Sanderling 7.75" 19.5 cm
- White-rumped Sandpiper 6" 15 cm
- Snowy Plover 6.25" 16 cm
- Semipalmated Plover 7.25" 18.5 cm
- Piping Plover 7.25" 18.5 cm
- Spotted Sandpiper 7.5" 19 cm
- Western Sandpiper 6.5" 16.5 cm
- Semipalmated Sandpiper 6.25" 16 cm
- Least Sandpiper 6" 15 cm

雁鴨類分布

鸕鶿類分布





曬池日期錯開

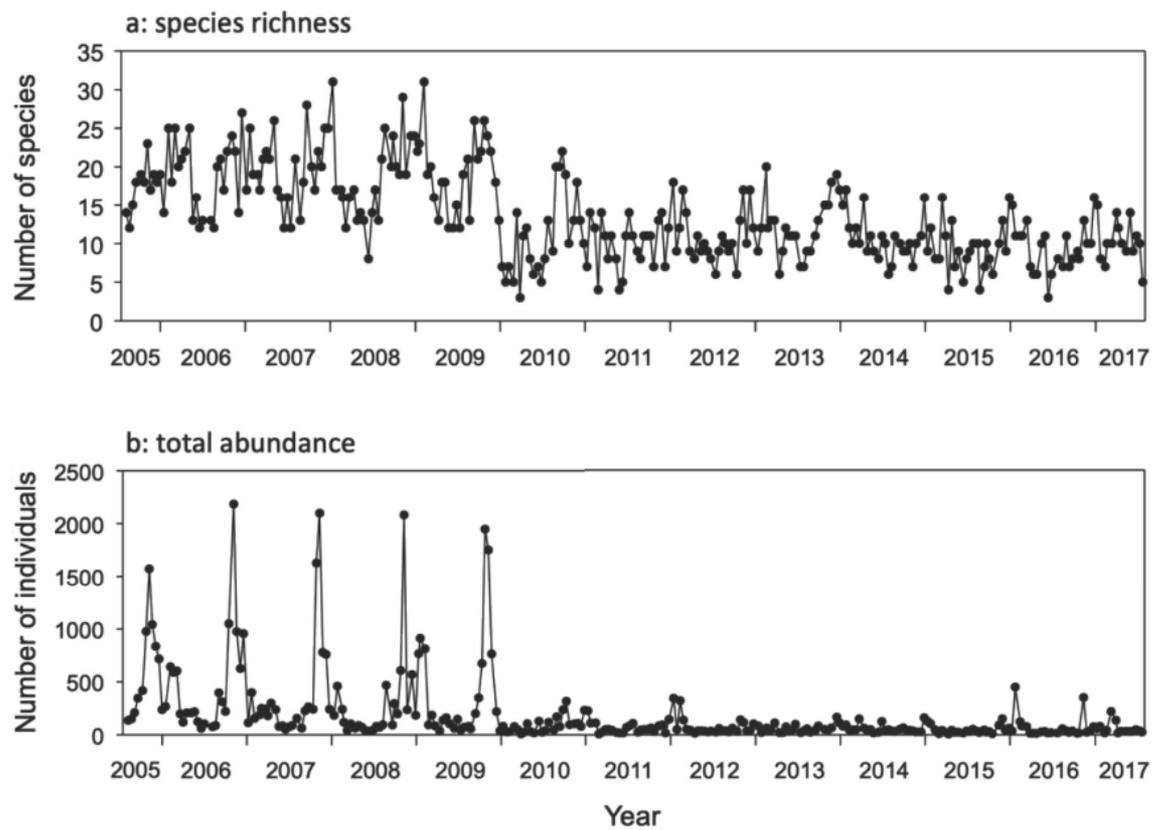
⇒ 在大的空間尺度上，
創造多樣環境

⇒ 延長水鳥可利用棲
地的時間



https://scontent.ftpe7-1.fna.fbcdn.net/v/t39.30808-6/335026733_169166972584236_7648865191645501077_n.jpg?_nc_cat=1&ccb=1-7&_nc_sid=8bfeb9&_nc_ohc=QTamuQJHr0AAX96Q-ob&_nc_ht=scontent.ftpe7-1.fna&oh=00_AfCG3AVu1_C6jBgon3t1vgVRQ1uz8hBg4VG_eS0VBH914w&oe=641737A7

留意案場內有無廢棄魚塭



鳥擅長抓住任何可覓食的機會



社會

社會焦點

保障人權

選擇適當時間點動工

⇒ 施工過程反而可能吸引
水鳥

⇒ 候鳥來之前

政府要太陽能／放怪手滅黑面琵鷺棲地 英國 賞鳥人：嘉義會後悔

【送票不意外】投你愛歌，帶你去嗨翻KKBOX風雲榜

4,093

讚



▲黑面琵鷺棲地遭破壞，引發賞鳥人與網友不滿。（圖／Richard Foster授權使用）

敬請指教！



許皓捷 shihj@gm2.nutn.edu.tw

國立台南大學 生態暨環境資源學系