

「東亞—澳大利西亞遷飛區」涉禽足旗顏色標識系統 Shorebird Colour Flagging Scheme in the East Asian-Australasian Flyway



腿上部 Upper Leg	腿下部 Lower Leg	國家/郡 Country	地點/位置 Location
黑/Black	黑/Black	緬甸/Myanmar	
藍/Blue	藍/Blue	菲律賓/Philippines	
綠/Green	綠/Green	泰國/Thailand	泰國半島及泰國灣 Thailand Peninsula & Gulf of Thailand
橙/Orange	橙/Orange	印尼/Indonesia	爪哇及巴厘島 Java & Bali
黑/Black	白/White	中國/China	崇明島(新) Chongming Island (New)
黑/Black	黃/Yellow	馬來西亞/Malaysia	(建議/Proposed)
黑/Black	黑/Black	新加坡/Singapore	拉惹港 Raffles Quay
藍/Blue	黑/Black	中國/China	海南/海島 Hainan-Guangxi
藍/Blue	藍/Blue	日本/Japan	北海道北端 Northern Hokkaido
藍/Blue	藍/Blue	蒙古/Mongolia	蒙古/海島 Mongolia
藍/Blue	橙/Orange	日本/Japan	九州/Kyushu
藍/Blue	白/White	日本/Japan	東京灣/Tokyo Bay
藍/Blue	黃/Yellow	中國/China	渤海灣/Bay of
藍/Blue	藍/Blue	日本/Japan	北海道東部 Eastern Hokkaido

腿上部 Upper Leg	腿下部 Lower Leg	國家/郡 Country	地點/位置 Location
橙/Orange	黑/Black	印尼/Indonesia	蘇門答臘/Sumatra
橙/Orange	藍/Blue	澳大利亞/Australia	塔斯馬尼亞/Tasmania
橙/Orange	綠/Green	澳大利亞/Australia	新南威爾士州 New South Wales
橙/Orange	橙/Orange	(未決定/Not allocated)	
橙/Orange	白/White	韓國/South Korea	黃海海峽(東) Eastern Yellow Sea (old)
橙/Orange	黃/Yellow	澳大利亞/Australia	南澳大利亞州 South Australia
橙/Orange	黑/Black	澳大利亞/Australia	維多利亞州 Victoria
白/White	黑/Black	中國/China	崇明島(舊) Chongming Island (old)
白/White	藍/Blue	中國/China	台灣/Taiwan
白/White	藍/Blue	紐西蘭/New Zealand	南島/South Island
白/White	橙/Orange	韓國/South Korea	黃海海峽(東) Eastern Yellow Sea
白/White	白/White	(未決定/Not allocated)	
白/White	黃/Yellow	中國/China	香港/Hong Kong
白/White	黑/Black	紐西蘭/New Zealand	北島/North Island
白/White	黑/Black	俄羅斯/Russia	堪察加半島 Kamchatka
白/White	藍/Blue	澳大利亞/Australia	北部領地 Northern Territory
白/White	綠/Green	越南/Vietnam	
白/White	橙/Orange	澳大利亞/Australia	西澳大利亞州南部 SW Western Australia
白/White	白/White	俄羅斯/Russia	庫頁島 Sakhalin Island
白/White	黃/Yellow	(未決定/Not allocated)	
白/White	黃/Yellow	澳大利亞/Australia	西澳大利亞州北部 Western Australia

資料來源 Source of Information: 藍亞—澳大利西亞遷飛區涉禽足旗顏色標識系統 Framework for the East Asian-Australasian Flyway

個別的大型水鳥例如黑臉琵鷺，另有一套特定的腳環顏色標識系統。在香港環誌的琵鷺右腳套上一個綠色環，刻有以A字開始的編號，韓國以K或開始，台灣以T開始，日本以J開始；而部份琵鷺的左腳則套上有獨特顏色組合的腳環，以分辨個別琵鷺。



資料來源 Source of Information: Chan et al. 2010. International ringing system for the Conservation of Black-faced Spoonbill (Platyrhinus ajacii). Bird & International Avian Division, Tokyo, Japan. CMS Secretariat, Bonn, Germany. 74 pages. Technical Report Series 22.

黑面琵鷺的足旗顏色標識系統，另有一套特定的腳環顏色標識系統。在香港環誌的琵鷺右腳套上一個綠色環，刻有以A字開始的編號，韓國以K或開始，台灣以T開始，日本以J開始；而部份琵鷺的左腳則套上有獨特顏色組合的腳環，以分辨個別琵鷺。

資料來源 Source of Information: Chan et al. 2010. International ringing system for the Conservation of Black-faced Spoonbill (Platyrhinus ajacii). Bird & International Avian Division, Tokyo, Japan. CMS Secretariat, Bonn, Germany. 74 pages. Technical Report Series 22.

你可以

把有關水鳥環誌的觀察資料，包括相片(包括水鳥腳上的足旗或金屬環的編號及顏色)、鳥種和地點，電郵香港觀鳥會 (legflags@hkpbs.org.hk)，或把資料上載至香港觀鳥會的網上討論區，網址為www.hkbws.org.hk/BBS。如發現野鳥被困、受傷或死亡，可致電1823通知漁農自然護理署跟進。

多媒體辨識及攝影水鳥
及參與水鳥監察活動

You can

Send an e-mail (legflags@hkbws.org.hk) to the Hong Kong Bird Watching Society (HKBWS) and attach your observation record including pictures (which shows numbers on the leg-flag or metal ring), bird species and location of waterbirds; or upload the information to the HKBWS forum at www.hkbws.org.hk/BBS.

If you encountered wild birds being trapped, injured or died, please contact Agriculture, Fisheries and Conservation Department (AFCD) at 1823 to follow up.

Practice more on waterbird identification and photography, and participate in waterbird monitoring activities

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水鳥遷徙

Waterbird Migration



水鳥是泛指在水體或其附近活動並賴以維生的雀鳥，全球約有8000多種，香港約有110種，包括以下類別：鵝、鸕、鸕、鴨、鵝、鵝、秧雞、鴉和鸕、鸕和燕鴉。根據近年的調查結果，有多達7萬至9萬隻水鳥在香港新界西北米埔內后海灣一帶的濕地越冬；春秋兩季，米埔后海灣也有2萬至3萬隻過境遷徙水鳥的紀錄。

Waterbirds is a general term denoting birds that are dependent on water bodies and their surroundings for living. There are about 800 species of waterbirds in the world, about 110 of which have been recorded in Hong Kong, including grebes, Cormorants, egrets, herons, ducks, spoonbills, rails, coots, plovers, sandpipers, gulls and terns. In recent years, about 70,000 to 90,000 wintering waterbirds have been recorded in the wetland areas of Mai Po Inner Deep Bay in the northwest New Territories of Hong Kong. A further 20,000 to 30,000 passage migrant shorebirds also used Deep Bay as a migration stopover each year.

追蹤 遷徙水鳥

Tracking of migratory waterbirds

研究人員捕捉、標識和釋放遷徙水鳥，目的是研究牠們在遷徙時的路線與遷徙規律。現時研究人員使用的方法有多種，本小冊子介紹其中兩種市民常有機會在野外觀察到的方法：

- (1) 環誌 (2) 遙測追蹤
- Researchers capture, mark and release migratory waterbirds to study their migration routes and migratory pattern. There are several methods of marking the birds, this pamphlet introduces two methods that are commonly observed in the field:



香港紅尾 紅尾燕鴉
© Jenn & John Heines

鳴嘴燕鴉的左腳腳趾處上金屬環，從足趾的顏色及安裝的位置，顯示研究人員將該鳥列入何種鳥類標識系統，而腳趾上的金屬環(COV)則顯示研究人員在何處捕捉到該鳥類。

A Curlew Sandpiper with a metal ring on its lower left leg and a leg on its upper right leg. The leg flag colour and flagging location show that the sandpiper was tagged in north Hong Kong as a passage migrant. The leg flag (COV) shows identification of this bird at a distance.



香港紅尾 紅尾燕鴉
© Jenn & John Heines

香港使用的足趾標識為「上白下黃」，圖中的紅尾燕鴉的左腳腳趾處上金屬環，令我們更易分辨牠的標識。左腳腳趾上的足趾，令我們更易分辨牠的標識。The colour flagging protocol in Hong Kong is white (upper) and yellow (lower) on the right leg. The letter-number combination (N44) on this Common Redshank allows individual species identification.

大紅腿的紅尾燕鴉，在澳洲北部海岸越冬。Great Knot breeds in Scotland, with most birds spending the winter in northern Australia.



香港紅尾 紅尾燕鴉
© Alan Chan



香港紅尾 紅尾燕鴉
© Alan Chan

青頭鴨是香港常見的冬候鸟。由於牠們是「極度洩鳥」，鳥類數量減少，現時已被國際自然保護聯盟列為「極度瀕危」。青頭鴨的數量正以驚人的速度下降。由於牠們是「極度洩鳥」，鳥類數量減少，現時已被國際自然保護聯盟列為「極度瀕危」。Bewer's Pochard is a rare winter visitor to the Deep Bay area. Due to rapid decline of its global population, it is now listed as 'Critically Endangered' by IUCN.

亞歷松環誌標識足趾的無嘴環鵞標識。A metal ring on the foot of a Black-billed Spoonbill.



香港紅尾 紅尾燕鴉
© Alan Chan

(1) 環誌 Ringing
研究人員會把刻有特定編號的金屬環、有顏色的足旗或腳環套在水鳥的腳上，以便收集詳細資料，包括遷徙時間、途徑、繁殖或越冬地點、以及停留時間等。有些研究例如：涉禽、黑臉琵鷺也會使用特定顏色組合的腳環或足旗標識個別鳥種。

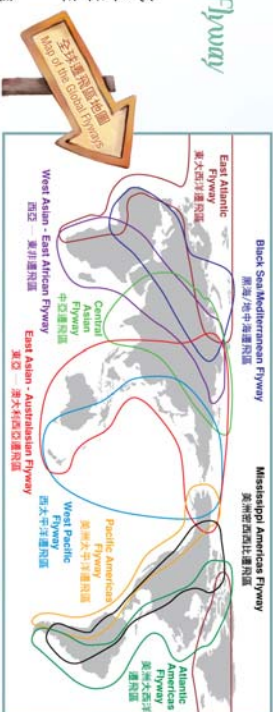
Researchers will put a metal ring engraved with individually-identifiable numbers, leg flags or colour rings on legs of waterbird in order to collect detailed information including time of migration, stopover, breeding or wintering locations and duration of the stopover. In some research schemes (e.g. Shorebird, Black-faced Spoonbill), different colour ring combinations or numbered rings/flags are used to distinguish individual species in the field.

遷徙 與 遷飛區

Migration and Flyway

為了適應季節轉變和躲避寒冬，很多在北半球棲息的水鳥都會在每年冬天來臨之前，飛往較溫暖的南方越冬，待翌年春天再返回北方繁殖。候鳥每年周而復始來往繁殖地與越冬地的行為通稱為「遷徙」。

候鳥遷徙時途徑的不同地點稱為「中途站」，這些遷飛路線以及中途站所覆蓋的地理範圍稱為「遷飛區」或「飛行路線」。現時全球共有8個主要候鳥遷飛區，其中最大的「東亞—澳大利西亞遷飛區」覆蓋約22個國家及地區，由北方的俄羅斯遠東地區和阿拉斯加向南延伸至東亞和東南亞，直至南面的澳洲和紐西蘭。香港位於這個遷飛區的中間，是很多候鳥其中一個重要的中途站。



To escape the bitter northern winter, waterbirds have evolved a strategy to fly south every autumn to their warmer winter quarters, returning north in the next spring to breed. This regular back and forth movement between the northern breeding grounds and the southern wintering grounds every year is known as 'migration'. Migratory waterbirds stopover en route at various places that are known as 'staging areas'. The migratory routes and stopover sites can be generally grouped geographically into 'Flyways'. There are a total of 8 major flyways in the world. The East Asian-Australasian Flyway is the largest of these and spans an area from Russia and Alaska in the north, through east and southeast Asia to Australia and New Zealand in the south. This flyway covers about 22 countries or regions. Hong Kong is located about midway and serves as an important staging area for many migrants.

(2) 遙測追蹤 Telemetry tracking

研究人員把無線電、衛星追蹤器或地理定位器安裝在水鳥身上後，便可以記錄有關水鳥遷徙的詳細資料，包括覓食和棲息情況。部份追蹤器使用具有全球定位的遙測技術，更能準確顯示雀鳥的遷徙路線、中途站以至繁殖地或越冬地的位置。

Researchers put radio transmitter, satellite transmitter or geolocator on waterbirds to collect migratory data, including foraging or roosting habitat of the waterbird species. Some transmitters that are incorporated with Global Positioning System (GPS) technology can locate precisely the migration route and stopover sites of waterbirds and their breeding or wintering locations.

安裝於鸕鶿背上的衛星追蹤器。A satellite transmitter has been fitted on the back of a Great Cormorant.



香港紅尾 紅尾燕鴉
© Alan Chan

足旗 顏色標識系統

Colour Flagging Scheme

在「東亞—澳大利西亞遷飛區」網絡內的研究人員會依照其國家或地區特定的足旗顏色標識系統進行環誌，以便觀察者辨識個別涉禽被環誌的地點。由2001年開始，香港使用的足旗顏色為「上白下黃」，套於涉禽右腳；而2010年開始，在香港使用的足旗均有英文字母或數字組合，以辨識個別涉禽。

Researchers in the East Asian-Australasian Flyway network follow a specific leg-flagging scheme, where each country or region has a specific colour combination, to allow observers to recognise the region where the individual shorebird was flagged. Since 2001, Hong Kong has adopted the colour combination of white (upper) and yellow (lower) flags on the right leg. Since 2010, a combination of letters and/or numbers are added to distinguish individual species.