

臺灣瀕臨絕種的線塊端龜

The Taiwan Green Turtle Chelonia mydas



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臺灣濒臨絕種的綠蠵雞

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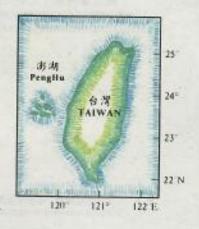
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臺灣瀕臨絕種的綠蠵龜, Chelonia mydas

臺灣共有五種海龜,分別是綠壩龜, Chelonia mydas,亦 填意 · Caretta caretta · 玳瑁 · Eretmochelys imbricata · 疣 邁龜 · Lepidochelys olivacea · 及革義 · Dermochelys caviacea,五種海龜中以綠鳩雞鳥最常見、但數量並不多。 行政院農業委員會有鑑於此,遂於民國78年設立野生動物 保育法,将五種海龜均列爲"瀕臨絕種的野生動物",並規 定所有的海龜均須加以保護,除了特殊的情形外,禁止騷擾 覆捕、虚待、数害、以及非法擁有或買賣:其他相關之法 今,如民國71年設立之文化資產保護法以及民國78年修 正之流囊法規中亦有明文的規定保護道些瀕臨絕種的野生動

農委會從民國81年起,委託國立臺灣海洋大學,海洋生 物研究所副教授程一敲博士進行海龜生物學之研究,程博士 已於近日受邀加入國際物種保存委員會(88C)以及國際



影湖望安島沙漠上正待產卵的母龜。 The gravid green turtle on the beach of Wan-An Island, Penghu archipelago.

The Taiwan Green Turtle Chelonia mydas

There are five species of sea turtles in Taiwan, the Green Turtle, Chelonia mydas, the Loggerhead Turtle, Caretta caretta, the Hawksbill Turtle, Eretmochelys imbricata, the Olive Ridley Turtle, Lepidochelys olivacaea, and the Leatherback Turtle, Dermochelys coriacea. Among them, the Green Turtle is the most common, but nevertheless few in number. The Council of agriculture (COA) enacted wildlife legislation in 1989, listing all sea turtles as "Endangered Wildlife". The law stipulates that all sea turtles should be protected. Expert nuder extraordinary circumstances, sea turtles may not be disturbed, abused, hunted, captured, traded, killed, exchanged, or illegallly owened or possessed. Other related laws, such as the Cultural Heritage Conservation Law dating from 1982, and the Fishery Law (amended in 1989) stipulate similar measures to protect these endangered turtle species both on land and on the

Research on the biology of the Green Turtles funded by the Council of Agriculture began in 1992. The project is headed by Dr.



正在沙漠上工作的海急研究小组。 The sea turtle research team at work.

望安岛上的綠螺龜

綠攜邀在望安島上之產和季節每年從五月到十月間,成熟

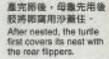


正在產卵的級鐵龜。 The nesting green turtle.

Cheng, I-Jiunn, an associate professor at the Institute of Marine Biology, National Taiwan Ocean University. Dr. Cheng became a member of the SSC and the Marine Turtle Specialist Group (MTSG) of the IUCN recently. His project, which concentrates on the nesting ecology of Taiwan sea turtles, found that the Green Turtle nests mainly on Wan-An Island, and few other beaches on the Penghhu Archipelago, Southwest of Taiwan.

The green turtles at Wan-An Island

The nesting season of the green turtle at Wan-An Island lasts





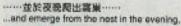


選中之既在網邊 4 6 到 5 5 天観化後 - 小 海龜出生了····· After 45 to 50 days, the baby fiztles hatched,

的危機,漁民榜構海龜,吃其肉,將其龜假製成裝飾品,挖 擬其蛋來吃或孵化拔非法販賣圖利,近岸定置網、延總約及 其他網具之意外補獲都會使海龜受傷成樹斃;許多被洛提的 海龜都被賣到幸願去展售,不良的水核環境會使海龜得病而 死亡;不當的海難開發(如藥提及建步道)以及挖沙做各種 公其工程都會破壞其產即環境,甚至會造成整個沙灘因侵蝕 而消失。根據調查,遇去臺灣的東岸及南岸共有37處海龜 產卵的沙灘,如今只剩下6處,而且大部分都集中於澎湖群 島區。

綠蟾龜的保育工作

儘管面臨許多的生存危機、綠端廳的保育工作仍然獲得若







coverage, proximity to the sea, nest depth, and whether or not the nest is subject to human disturbances such as egg poaching. The baby turtles range from 41 to 54 mm in straight carapace length and weight 12 to 33 grams. They emerge at night and move quickly toward the brighter shimmering world of the ocean. Within minutes, they were disappeared in the ocean, leaving behind nothing but hundreds of small footprints on the beach.

The endangered Green Turtle

Misuse of resource and the lack of proper research in the past have left the Green Turtle in Taiwan facing serious threats. Direct harvest of the turtle for its meat, use of its shell for ornaments, poaching and sale, unintentional capture in coastal setnet, longline, and other fishing gears also lead to injury or drowning of this species, many turtles captured alive have been sold to temples for display. Poor captivity conditions result in turtle death from illness. Improper beach constructions (e.g. dikes and walkways) and sand mining have even eroded the beach completely. Once there were at

僅在沙漠上留下數百億小小的足印。 leave only hundreds of footprints on the beach.





寺廟中展集的海礁。 The captived green turtle was displayed in a temple.

平成效,在當地鄉長的大力宣導環保及保育之重要性後,民 眾已對拯救維攜廳之行動加以重視:許多澎湖縣之中、小學 亦以望安的綠繼廳做馬保護野生動物之教育題材。

望安的綠鳩應產的旗群雖然不多。但產出腳窩數卻有遂年 增加之趨勢,母龜於1992年度下44窩即。有6窩被盗 挖。1993年產下53窝即,僅1窝被盗挖,到了199 4年夏天母龜共產了193窩,有五千隻以上的小海龜安全 的孵化出來回到大海中,雖然說,目前仍無法確定在望安的 綠鳩龜產即族群已經恢復了,但從逐年增加的稚龜數量中, 我們可以看出島上的綠鳩龜將會有一個美好的前景。

今年夏天,這個計劃已推展至國際合作的層面,線由農委 會的協助,程教授出面邀請了國際生態保育聯盟海龜工作小 組之副主席博樂茲先生來臺協助人造衛星造戰以及其他相關 之保育工作,在他的聶力幫忙之下,我們很成功地將與法國 及下官 0 8 資料處理公司達繁之 8 T - 6 人造衛星發租薪裝 置於兩隻海龜背上;這是我國第一次將人造衛星造戰技術應 用於野生動物之研究工作上。在經過兩個率月的造職援,對達日 現望安一體在洄游了近一千一百公里的直線距離援,到達日 本九州外海的避州島附近海城;而望安二號則洄游了近四百



在藝品店中展示的海龜標本。
The stuffed green turtle was displayed in a ornament shop.

least 37 nesting beaches distributed on the southern and eastern coasts of Taiwan, but today only six remain, mainly along the Penghu Archipelago, where Green Turtles could still be found in 1994.

Protection of the green turtle

Despite all these threats, prograss has been made toward protecting the Green Turtle. A strong campaign by the country's leadership for a clean environment and the protection of endangered wildlife has raised awareness of the need to save the Green Turtle on Wan-An Island. Most primary and high schools in Penghu County are studying the Green Turtle to Practice wildlife conservation.

The remaining nesting rookeries of the Green Turtle on the Wan-An Island, though few in number, are increasing each year. The mother turtles laid 44 nests 1n 1992, six of which were poached. In 1993, 53 nests were laid and only one was poached this summer, more than 100 nests were laid and thousands of baby turtles safely released to the sea, Although it is still too early to say with certainty that the Green Turtles on Wan-An Island are recovering, the increasing number of hatching does suggest a brighter future for the Green Turtle on the island.

This summer, the Project has advanced to the international level. Through the COA, Dr.Cheng has invited Mr. George H Balazs, Deputy Chairman of the Marine Turtle Specialist Group, IUCN to assist with satellite telemetry research and certain aspects of sea turtle conservation. With his helps, Telonic ST-6 satelite transmitters linked to the Argos system were deployed successfully on two gree turtles. This is the first time we have ever utilized satellite biotelemetry to monitor wild animals. After two month's tracking, one turtle migrated northward over 1100 miles straight distance toward Shimo-kosmiki-jima Islet, which is a part of Kyushu Island, Tapan. The other turtle also migrated notrhward over 400 miles straight distance, stayed in the nearshore waters outside the Tamsui Estnary, Taipei County. The South Pacific Regional Environment Programme (SPREP) announced that 1995 will be the Year of Western Pacific Sea Turtle. The COA in planning to join the program and host corresponding activities in the region.

In order to strengthen existing conservation regulations, the ROC legislature passed the New Conservation Law (Executive Act



被盜挖的海龜蛋。 The posched green turtle eggs.



理於影測望安思維機動產期沙漠上之水泥步道以及衡浴股機。 The cement walkway and a bathroom-toilet combination built on the nesting beach of the Wan-An Island, Penghu Archipelago.

公里的直線維維推排相於大屯山到茶陰附近之海城中。南太平洋地區環境組織 (SPRSP)已轉1995年定為西太平洋遊廳保育年,而農委會也正在積極地籌劃加入其經議,並準備主辦一系列臺灣地區的相關活動。

為了加強目前的保育法,立法院已於民國83年10月底 通過野生動物保育法之修正條例,來加強取締非法交易、侗 養、以及其他危及野生動物生存之活動:同時,農委會亦於 同年12月通過澎湖縣政府所提之於望安島設立賺邁載產和 地保護區的建議書,在這個計劃下,我們可望在下一年產和 季時多產幾個沙灘經過員來執行保育工作。

一位保育人士於裝薦83年9月23日的夜晚於基隆的一 家水核店內餐現五隻小海龜正待價而治,經由通報後,一位 市政府的官員將它們較出並送到程博士的實驗宣中智時保管

澎湖望安島上一所小學廳灣上的綠塘龜鹽寮。它已成為該島中、小學保育該齊之——主要動物題材。

The green turtle painting on the wall of a primary school as a symbol of conservative wildlife on the Wan-An Island, Penghu Archipelago.





博樂茲先生參與澎湖望安島上級議島人遊產里發報器之装置工作。 Mr. George H. Balazs and the see turtle research team on the satellite telemetry work at Wan-An Island, Penghu Archipelago.

of October 1994, as amended) to tighten measures directed against illegal trade, breeding in captivity or other forms of destruction to endangered wildlife. Meanwhile, in December 1994 the COA also granted a proposal submitted by the Penghu county government to establish refuge beaches for the nesting Green Turtle on Wan-An Island. Under the new available budget, more guards will be hired in conting years to petrol the beaches during the nesting seasons.

On the evening of Septenber 23 this year, a ainmal lover found five captive baby Green Turtles for sale in a pet store in Keelung. They were rescued and sent to Dr. Cheng's laboratory for the temporary shelter by officials from the Keelung city council. Two day later, the public prosecutor ordered the immediate release of the rescued turtles. Because the shop owner refuse to provide the information about the supplier of the baby turtles, the release ceremony was held on a carefully chosen beach, the Sanshu Beach on the Makung Island. Green Turtle nesting rookeries were quite abundant on this

背上裝置 S T - 6 人选斯里登翰器的綠塘龜 -The green furtle with the ST-6 satellite transmitter mounted on her back.





育上裝置 S T - 6 人造衛 屋發報器的線鐵龜既向大 海。

The ST-6 satellite transmitter mounted turtle move toward the sea .



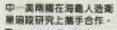
商上裝置 S T - 6 人造商 服装報器的級議業那回海 中。

The ST-6 satellite transmitter mounted turtle move into the water.



從民國83年8月26日 到10月25日間裝置8 T-6人造衛星登報務之 終備職的政府路径。

The migration route of a green turtle from Aug. 26 till Oct. 25, 1994.



The cooperation in the sea turtle conservation work betweenROC & US.



斯湖望安島上級鐵龜產到 地保護區之規劃工作。

The establishment of the refuge sites for the gravid green turtle on the Wan-An Island, Penghu Archipelago.



五隻從水族店中拯救出来 的小海龜。

The rescued captive baby green turtle.



馬公島山水沙灘上的綠鄉 龜野放機式。

The release coromony hald on the Sanshu beach of the Makung Island.



海龜野放後,程博士與高 縣長以及儲主費商級澎湖 的保育工作事宜。

After ceremony, Dr. Chang discussed conservation issues with the local political leaders.



:兩天後,在預查告一般落時,檢察官下令立即野被,因為 應主拒絕提供海廳之來源,野放的儀式在經過細心選擇後, 選定於詢詢縣馬公島上的山水沙灘。二十年前這個沙灘上有 真數眾多的綠鳩龜上岸產部。如今所創寥寥無點,我們具誠 的希望能發由這個野放儀式喚起民眾的保育意識,並重建當 地之產和被轉,這個野放行為引起全國的重視,也提供了中 、小學者如一個保護野生動物的最佳教育題材。

臺灣綠螺龜之前途

雖然就嫌繼蠢的保育行動已經展開了,然而,以目前的情 形要斷論說臺灣的海龜族群已恢復往日的盛秋又似乎太早了 ,不過,在不斷地加強野生動物保育之文宣工作、加強取締 非法野生動物的交易以及透過各種管道教育民眾認識維編 的努力下,這個瀕離絕種的野生動物游在臺灣有一個很好的 生存的機會,而於望安島上設立綠端龜產卵保護區之擊,將 更進一步地幫助這個動物恢復以往的旅群量。



臺灣的綠鐵鐵路有一一光明的前景 The brighter future of the green turtle in Taiwan.

Beach twenty years ago, but now only a few are left. It is hoped that this ceremony will raise conservation awareness and rejuvenate the Green Turtle population. The rescue story attracted nation-wide attention and provide a good opportunity for school teachers to stress the importance of the wildlife conservation to their students.

The future of the green turtle in Taiwan

Even though there has been some progress in protecting the Green Turtle, it is still too early to declare that Taiwan's sea turtles have recovered. However, an increasing awareness of the need for wildlife conservation, tighten the conservtionn measures, increasing international cooperation on the sea turtle research, and growing public familiarity with the Green Turtles through education promise a brighter future for this endangered species. The establishment of the refuge site for the pesting Green Turtle on the Wan-An Island will also help bring this animal back to the previous population levels.