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## Newly Discovered Danaids Overwintering Site in South Lantau Around Ten Thousand Danaids Found

On 28 November, Mr. Alfonso Ho, a Green Power Butterfly Surveyor, discovered a previously unknown butterfly overwintering site in South Lantau. The newly discovered site is in a mixed forest in South Lantau Country Park, covering an area of approximately 1,000 square metres. Around 2,500 overwintering Danaids (tigers and crows) were spotted, with more than 95% of them being Blue Spotted Crows (*Euploea midamus*). Even so, the vast majority of the Danaids were surely hidden from view, within the plantation. It is estimated that the whole population might be more than 10,000.

When Green Power revisited the newly discovered Danaids overwintering site on 1 December 2015 by Green Power, the number of Danaids had already dropped to around 1,000-2,000. It is believed that most had already dispersed and headed to the next stop on their autumn migration and overwintering route.

In addition to the newly discovered overwintering site in South Lantau, Fan Lau and Shek Pik are other known significant overwintering sites on Lantau. It is believed that there are other overwintering sites on the island which have not yet been discovered.

There are 13 Danaid species in Hong Kong; most are migratory, and overwinter in groups. Every year in autumn and winter, thousands of Danaids fly to Hong Kong from the north, stop for a while and return to the north or reproduce in the overwintering sites. Besides Hong Kong, overwintering butterflies are also found in Japan, Taiwan and Hainan, etc. At present, the overwintering migration routes are little known.

Green Power's Overwintering Danaids Survey was launched in 2009 and covers Sui Lang Shui, Tuen Mun; Deep Water Bay, Hong Kong Island; and Fan Lau, Lantau. The survey starts in November each year and ends in January the next year. The species, numbers and behaviour of overwintering Danaids are recorded.

According to the preliminary results of the Overwintering Danaids Survey in autumn and winter 2015, the number of overwintering Danaids at Siu Lang Shui has increased. On 10 and 25 November, there were 758 and 1,587, respectively, Danaids recorded in Siu Lang Shui; both figures are higher than the numbers recorded in the previous two winters.



According to the results of Green Power's Overwintering Danaids Survey, the number of overwintering Danaids at Siu Lang Shui has been fluctuating. The number rose from a few dozen in 2009 to over 5,000 in 2012, then plummeted to 230 in 2013 and 41 in 2014. Siu Lang Shui is a well-known over-wintering site for Danaids. It is also the only Site of Special Scientific Interest (SSSI) in Hong Kong established to protect the overwintering Danaids. Published records indicate that at the peak, the number of overwintering Danaids reached 40,000 at the site.

The cause of the fluctuating Danaids population is not yet known. There are various factors that are associated with the change - such as climate change. If winter in the East Asian regions is not as cold as in the past, Danaids may have a lower incentive to move south and the migration habit may also be altered. In addition, loss of natural habitats may also affect overwintering Danaids. The southward-migrating Danaids need to rest during their journeys, and if these mid-way stops are destroyed, they may not reach the final overwintering sites.