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Green Power's "Overwintering Danaids Survey" Results Overall Number of Danaids Declined 54% Year-on-Year, Recorded Decline for Third Consecutive Year

Environmental group **Green Power** has published the latest findings of its "Overwintering Danaids Survey". The survey recorded a total of 451 overwintering Danaids during the last winter (October 2023 to January 2024), which was a significant 54% decrease compared to the 982 Danaids recorded in the previous winter. This is the third consecutive year that a decline in the number of Danaids has been recorded.

Danaids are one of the few insects that exhibit mass migration behaviour. Each autumn and winter, large groups of Danaids will travel from the colder northern regions to warmer southern areas, to cluster and spend the winter. Located in the subtropical region, Hong Kong is one of the overwinter destinations along the Danaids' migration route. Green Power has been conducting the "Overwintering Danaids Survey" since 2009, and has continuously monitored the number of overwintering Danaids at Deep Water Bay on Hong Kong Island, Siu Lang Shui in Tuen Mun, as well as Fan Lau and Shui Hau on Lantau Island. The latest survey findings show that the number of overwintering Danaids recorded at the four locations, in descending order, are: 184 in Fan Lau; 136 in Siu Lang Shui; 86 in Shui Hau; and 45 in Deep Water Bay.

Ms. Helen Yau, Assistant Senior Education & Project Manager of Green Power, stated that although the overall number of overwintering Danaids at the four survey locations has been on a declining trend in recent years, it is believed that the number of overwintering Danaids will have a chance to rebound in the future as observations indicated that the vegetation at the four locations remains intact, and the environment has only changed slightly.

Analysis of the data from the four survey locations reveals that Fan Lau and Shui Hau, situated in the southern part of Lantau Island, have a higher population of "Tigers" (such as the Ceylon Blue Glassy Tiger (*Ideopsis similis*) and the Common Tiger (*Danaus genutia*)). The number of Danaids in both locations has remained between 200 and 400 over the past few years with a narrow range of fluctuations, indicating higher stability in this species of Danaids.



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Conversely, Siu Lang Shui and Deep Water Bay are predominantly inhabited by "Crows" (such as the Blue-Spotted Crow (*Euploea midamus*) and the Common Indian Crow (*Euploea core*)) The number of Danaids in these two locations has exhibited a large range of fluctuations in the past few years, and could range from dozens to over a thousand, indicating that this species of Danaids is more susceptible to annual climate and environmental changes.

Over a Thousand Danaids Return to Tai Lam Country Park

Ms. Yau pointed out that all four locations covered by Green Power's "Overwintering Danaids Survey" are traditional local overwintering sites for Danaids, where overwintering Danaids clusters have been observed annually. However, large clusters of Danaids are occasionally found in other locations in Hong Kong each year. Tai Lam is one such example outside of the four locations. During this past winter, Tai Lam recorded as many as 1,545 overwintering Danaids, and the last time such a large number was recorded in the area was during the winter of 2020. Ms. Yau believes that there is potential for the area to become an important overwintering site for Danaids in Hong Kong. As the location of Danaids clusters is on the periphery of Tai Lam Country Park, she hopes that the authorities will recognise the ecological importance of the park's periphery areas and avoid development on related land.

Furthermore, **Ms. Yau** noted that in recent years, an increasing number of groups have been studying overwintering Danaids and tracking their migration routes through tagging, which involves capturing and tagging Danaids. She reminds the public that the tagging of Danaids must be conducted by trained and licensed personnel, and that the general public should not attempt to tag Danaids on their own.

Overwintering Danaids Survey

The survey, conducted by Green Power, began in 2009 and covers four locations—Deep Water Bay on Hong Kong Island, Siu Lang Shui in Tuen Mun, and Fan Lau and Shui Hau on Lantau Island. The survey begins in October and ends in January of the following year. It documents the number, types, and behaviours of the overwintering Danaids. Every autumn and winter, tens of thousands of Danaids migrate southward from the colder regions to Hong Kong. Currently, their migratory route is still unclear. Apart from Hong Kong, overwintering Danaids have also been found in Japan, Taiwan, and Hainan. It is likely that these various regions are on the same migratory routes of the Danaids.