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Results of Butterfly Survey 2015
Most Rare Butterflies Recorded at Sha Tau Kok and Lok Ma Chau
Consideration of Conservation Necessary when Developing Former Frontier Closed Area

Green Power released the latest Butterfly Survey results, with 162 butterfly species recorded at 10 butterfly hotspots, representing over 60% of butterfly species recorded in Hong Kong. The highest number of butterfly species recorded was at Luk Keng with 98 species, which included 5 rare and 5 very rare species. This was followed by Yuen Tun Ha, which had 96 butterfly species recorded, including 8 rare and 7 very rare species. The location with the third highest number of butterfly species recorded was Sha Tau Kok, which had 94 species of butterflies, including 9 rare and 6 very rare species.

This butterfly survey was conducted by 209 butterfly surveyors, covering ten local butterfly hotspots: Mui Wo and San Tau, Lantau; Wu Kau Tang, Fanling; Lam Tsuen and Yuen Tun Ha, Tai Po; Sham Chung and Yung Shue O, Pak Sha O and Lai Chi Chong, Sai Kung; Luk Keng, Fanling; Sha Tau Kok; Lok Ma Chau-Long Valley-Ho Sheung Heung. The Green Power Butterfly Survey initially began in 2008, covering three local butterfly hotspots. With the addition of a new survey locations each year, there are now ten local butterfly survey hotspots covered.

By comparison with past data, the results of this year's survey show that the numbers of butterfly species recorded for most butterfly hotspots were generally stable. Butterflies are indicator species that help assess the ecological value of an area. Currently, the number of butterfly species for various survey locations is stable, revealing that the natural environment of various locations remains relatively unharmed. These are very pleasing results.

However, there were declines in the numbers of butterfly species at Mui Wo, Pak Sha O, and Lai Chi Chong. Yet, Mui Wo has only been included under the survey scheme last two years. As the latest survey has only been underway for four months, it is difficult to directly compare this year's results with the past survey results, which covered a year's worth of data. It is expected that more butterfly species will be recorded later. The reasons for the decreases in numbers of butterfly species at Pak Sha O and Lai Chi Chong are unclear, as there have been minimal changes in the local environment. Hence, further observations are needed.

Rare butterflies comprise 15% of butterfly populations of Sha Tau Kok and Lok Ma Chau

Sha Tau Kok and the Lok Ma Chau-Long Valley-Ho Sheung Heung area have the most rare butterfly species. 9 rare and 6 to 7 very rare types butterflies were recorded, respectively, accounting for 15% of the total number of butterfly species in both areas.

Green Power previously made a number of important findings at Sha Tau Kok, including the first discovery of the European Beak (*Libythea celtis*) in Hong Kong, near Sheung Tam Shui Hang. There was also another recent discovery near Sheung Tam Shui Hang - of the Hooked Oak Blue (*Arhopala paramuta*), which was the first record in more 30 years and also the first photographic record in Hong Kong. Last month (September), butterfly surveyors also found a very rare butterfly, Malayan (*Megisba malaya*), which has a very small distribution on Cheung Chau, at Deep Water Bay and a few locations on Lantau Island.

The area around Lok Ma Chau and Long Valley was newly incorporated as a survey location this year, given the opening of the former frontier areas in the last two years. Just within the four months of surveying, 9 rare and 7 very rare butterfly species were recorded. The area also has the most rare butterflies among the ten butterfly hotspots. In the past, people typically believed that butterfly hotspots were concentrated around Sai Kung and Tai Po. However, it is evident that the area around Sha Tau Kok and Lok Ma Chau-Long Valley is currently a very important butterfly hotspot and there are important butterfly resources in the Northern New Territories.

Strengthening of Conservation needed for Former Frontier Area

One thing that both Sha Tau Kok and Lok Ma Chau have in common is that both were former Frontier Closed Areas. Both frontier areas were established in the 1950s. Apart from farmlands, fish ponds and low density village housing, they are mostly undeveloped or rural zones with low intensity development that retained a natural landscape, which may be the reason for the presence of relative high numbers of rare butterflies. Yet, both Sha Tau Kok and Lok Ma Chau are facing huge pressures for development since their opening between 2012 and 2013.

By this year, the Sha Tau Kok Frontier Closed Area has only been opened for three years. Housing estates formed by village houses, outdoor carparks, recreational farms and war game ground are rapidly appearing in the area. Villagers have suggested the development of Sha Tau Kok Hui into a shopping district and border crossing, while political parties have even suggested using Sha Tau Kok as a test location for establishing "Border Industrial and Trade Region".

In contrast with Sha Tau Kok, there were less changes to Lok Ma Chau after its opening. Yet, there were proposals for developing a post-secondary education institution in the Lok Ma Chau Loop area. There was mention of joint development of Loop Area by Hong Kong and Shenzhen governments in the 2007 to 2008 Policy Address. Some of the facilities are expected to come into operation by 2020. Green Power expressed concern over the encroachment on the natural environment. Precious butterfly populations will also disappear as a result of these proposals being implemented.

The original Frontier Closed Area must be developed with consideration of conservation measures, to serve as a prime example of the government's achievement in implementing sustainable development. In the case of Sha Tau Kok, only 2.76 hectares are listed as "Conservation Area", which is inadequate for providing protection for most of the places with ecological value. Currently, the government is planning to list Sha Tau Kok and the adjacent Robins' Nest as a country park. The plan should be implemented immediately, while the woodland connecting Sha Tau Kok Village and Robin's Nest should be protected as either as a Site of Special Scientific Interest, special area or Conservation Area, to act as a buffer zone between the villages and the country park and enhance conservation.

As for Lok Ma Chau, much land has been designated as Conservation Area or Green Belt, according to the Outline Zoning Plan, while only a small fraction of land is designated for village housing development. Yet, there are still no planning designs for the Loop area, which had been slated for joint development between Hong Kong and Shenzhen. It is hoped that the authorities can immediately draft development plans that balance conservation needs. Currently, Green Power continues to conduct butterfly surveys in the area, to provide more ecological data for the future conservation of the area.

About Butterfly Surveyors

Butterfly Surveyors was launched in 2008 in the hope of training people who can human collect local butterfly data over the long term. This is the first butterfly survey team formed by the general public. The team invests substantial efforts to collect data on butterfly ecology. All butterfly surveyors have to undertake a series of training sessions and assessments. We have now 209 qualified surveyors who carry out regular surveys at designated butterfly hotspots. Initially, we covered only three survey sites, but have since increased the number of sites by one each year, and this year expanded to ten sites: Mui Wo and San Tau on Lantau; Luk Keng in Fanling; Wu Kau Tang, Lam Tsuen (She Shan & Ng Tung Chai) and Yuen Tun Ha in Tai Po; Shum Chung & Yung Shue O, Sha Tau Kok, Pak Sha O and Lai Chi Chong in Sai Kung; and Lok Ma Chau-Long Valley-Ho Sheung Heung was the latest site to be added, in 2015.