

Appendix 12-4 Methodology and Results of Bird Trapping Surveys

Methodology

In order to survey as effectively as possible the range of passerine species and their numbers using LMC Loop, and in particular the sole habitat of significant ecological value, the reedbed, trapping of birds using mist-nets was carried out under a licence issued by AFCD. Trapping was carried out in three separate periods in early October (6th – 7th), late October (19th – 21st) and early November (9th – 11th) 2009. This covers the period of peak passerine migration in reedbeds and other wetland habitats in Hong Kong.

The aims of these surveys were to learn more regarding bird usage of reed marsh in an area (LMC Loop) previously very little surveyed, and to inform the point count and transect surveys carried out in Area A and elsewhere in respect of species occurring in reed marsh.

During each trapping period, nets were set on two successive mornings and on one or two preceding evenings, depending on suitability of weather conditions. During the morning trapping sessions nets were opened at first light and trapping was carried out for a period of three hours. Evening trapping was carried out for the last hour before dusk.

Trapping was carried out using four-panel mist-nets of 30mm mesh size. Nets were set on the edge of the reed marsh habitat between the point count locations of T1e and T1f (**Figure 12-2**) (total net length of 480m on 6th – 7th October, 600m on other dates) or within an area of young woodland adjacent to a pond adjacent to point count location T1d (180m on 6th – 7th October only). However, as the latter location proved unsuitable, it was abandoned after the first trapping session, and the length of net placed in the main area was increased. A summary of trapping effort is presented in **Table A12-9**.

Each bird trapped was fitted with an individually-identifiable leg ring, allowing that individual to be recognised when caught again.

Table A12-9. Bird trapping effort within the Lok Ma Chau Loop

Dates	Trapping times	Total length of nets opened	No. of individuals trapped
6 th – 7 th October	2 x morning, 1 x evening	Reed marsh 480m, Pond 180m	154
19 th – 21 st October	2 x morning, 1 x evening	Reed marsh 600m	176
9 th – 11 th November	2 x morning, 2 x evening	Reed marsh 600m	178

Results

A total of 508 individuals of 28 species were trapped in the LMC Loop during autumn 2009 (**Table A12-10**). Ten species trapped are considered to be wetland-dependent in Hong Kong. Six species are listed by Fellowes *et al.* (2002) as species of Local or Regional Concern. Most birds were trapped in the reed marsh nets; very few were trapped near the pond, and thus this site was abandoned after the first trapping session.

The five most abundant species trapped were Dusky Warbler *Phylloscopus fuscatus* (260 individuals), Oriental Reed Warbler *Acrocephalus orientalis* (82 individuals), Black-browed Reed Warbler *Acrocephalus bistrigiceps* (35 individuals), Scaly-breasted Munia *Lonchura punctulata* (28 individuals) and Zitting Cisticola *Cisticola juncidis* (16 individuals). The number of individuals trapped for Dusky Warbler, Oriental Reed Warbler, Black-browed

Reed Warbler and Zitting Cisticola suggest that LMC Loop provides important habitat for local populations of these species. The site would also appear to be important for other scarce species including Pallas's Grasshopper Warbler *Locustella certhiola* (five individuals), Lanceolated Warbler *Locustella lanceolata* (six individuals) and Bluethroat *Luscinia svecica* (four individuals).

Table A12-10 Total number of individuals ringed during each trapping period (retrapped individuals not included).

Species	No. of fully grown birds ringed			Total
	Period 1	Period 2	Period 3	
	6-7 Oct	19-21 Oct	9-11 Nov	
White-breasted Waterhen <i>Amaurornis phoenicurus</i>	1			1
Common Kingfisher <i>Alcedo atthis</i>	1			1
White-throated Kingfisher <i>Halcyon smyrnensis</i>	1			1
Eurasian Wryneck <i>Jynx torquilla</i>	1		1	2
Barn Swallow <i>Hirundo rustica</i>		2		2
Richard's Pipit <i>Anthus richardi</i>	4			4
Red-throated Pipit <i>Anthus cervinus</i>	2			2
Chinese Bulbul <i>Pycnonotus sinensis</i>		1		1
Brown Shrike <i>Lanius cristatus</i>	1			1
Red-backed Shrike <i>Lanius collurio</i>	1			1
Siberian Rubythroat <i>Luscinia calliope</i>		1	4	5
Bluethroat <i>Luscinia svecica</i>	1		3	4
Common Stonechat <i>Saxicola torquata</i>	9	3		12
Lanceolated Warbler <i>Locustella lanceolata</i>	3		3	6
Pallas's Grasshopper Warbler <i>L. certhiola</i>	3	2		5
Black-browed Reed Warbler <i>Acrocephalus bistrigiceps</i>	2	16	17	35
Oriental Reed Warbler <i>A. orientalis</i>	32	42	8	82
Thick-billed Warbler <i>Acrocephalus aedon</i>		1		1
Zitting Cisticola <i>Cisticola juncidis</i>	11		5	16
Yellow-bellied Prinia <i>Prinia flaviventris</i>	7	4	4	15
Plain Prinia <i>Prinia inornata</i>	4	3	8	15
Dusky Warbler <i>Phylloscopus fuscatus</i>	52	96	112	260
Arctic Warbler <i>Phylloscopus borealis</i>	1			1
Little Bunting <i>Emberiza pusilla</i>		1	1	2
Yellow-breasted Bunting <i>Emberiza aureola</i>	1			1
Chestnut Bunting <i>Emberiza rutila</i>			1	1
Black-faced Bunting <i>E. spodocephala</i>			3	3
Scaly-breasted Munia <i>Lonchura punctulata</i>	16	4	8	28
Total	154	176	178	508

A single Red-backed Shrike *Lanius collurio* was trapped on 7th October 2009. This constitutes the second record of this species in Hong Kong. The species is very rare in Hong Kong and is not expected to occur regularly in LMC Loop, and so local populations would not be impacted by the development.

Yellow-breasted Bunting is listed as Vulnerable by BirdLife International (BirdLife International 2009), and was considered by Fellowes *et al.* (2002) to be of Regional Concern. A single individual of this species was trapped on 7th October 2009. The reed marsh habitat within the Loop may be important for local populations of this species, especially as roosting habitat.

Individuals of six species were retrapped during later trapping periods, indicating that some birds remained in the area. Some of these retraps involved species that are primarily passage migrants through Hong Kong, e.g. Oriental Reed Warbler and Black-browed Reed Warbler. This indicates that the Loop is used by these species as a stopover during migration to build up fat reserves before continuing on their journey. Individuals of these species were retrapped during successive trapping periods (12 – 22 days after first trapping), but no individuals first trapped in early October were subsequently retrapped in early November (34 – 36 days later).

Other species may be resident in the Loop (White-breasted Waterhen) or migrants that will remain at the site through the winter (for example Dusky Warbler). The longer stay of some Dusky Warblers (up to 35 days) and one Zitting Cisticola (34 days) suggest these individuals may remain at the site for longer periods.

One Dusky Warbler trapped in LMC Loop on 21st October was subsequently retrapped eight days later (29th October) at Mai Po Nature Reserve during regular trapping at that site. This shows some degree of connection between the two sites for migrant passerines.

Table A12-11 Birds retrapped during subsequent trapping periods.

Species	First trapped		
	6-7 Oct		19-21 Oct
	Retrapped		
	19-21 Oct	9-11 Nov	9-11 Nov
White-breasted Waterhen <i>Amaurornis phoenicuroides</i>	1	0	0
Common Stonechat <i>Saxicola torquata</i>	1	0	0
Black-browed Reed Warbler <i>Acrocephalus bistrigiceps</i>	0	0	1
Oriental Reed Warbler <i>Acrocephalus orientalis</i>	3	0	3
Zitting Cisticola <i>Cisticola juncidis</i>	1	1	0
Dusky Warbler <i>Phylloscopus fuscatus</i>	5	2	8