

Appendix 10.4A: Avifauna Species Recorded within the Northern Portion of the Assessment Area

Common Name <sup>(1)</sup>	Scientific Name	Distribution in Hong Kong <sup>(3)</sup>	Principal Status <sup>(4)</sup>	Level of Concern <sup>(5)</sup>	Protection Status in China <sup>(6)</sup>	China Red Data Book <sup>(7)</sup>	Red List of China's Vertebrates <sup>(8)</sup>	IUCN Red List (Version 2022.2) <sup>(9)</sup>	Project Area												Assessment Area																								
									MIT	MAR	PO	NWC	MWC	SNWC	DAL	WL	MWL	PL	GL	V/O	DA	IF	MIT	MAR	PO	NWC	MWC	SNWC	SWG	DAL	WL	MWL	PL	SL	GL	V/O	DA	IF							
Asian Barred Owl <sup>(2)</sup>	<i>Glaucidium cuculoides</i>	Uncommon resident	R	-	Class II	-	Least Concern	Least Concern												+														+											
Asian Brown Flycatcher	<i>Muscicapa latirostris</i>	Common passage migrant and winter visitor	M,W	-	-	-	Least Concern	Least Concern												+		+													+										
Asian Koel	<i>Eudynamys scolopaceus</i>	Common resident	Su,R	-	-	-	Least Concern	Least Concern		+										+		+	+											+	+										
Azure-winged Magpie	<i>Cyanopica cyana</i>	Introduced resident. Found in Mai Po.	-	-	-	-	Least Concern	Least Concern		+										+	+		+											+	+										
Barn Swallow	<i>Hirundo rustica</i>	Abundant passage migrant and summer visitor	SpM,Su	-	-	-	Least Concern	Least Concern		+	+++																								+										
Black Drongo	<i>Dicrurus macrocercus</i>	Common summer visitor	M,Su	-	-	-	Least Concern	Least Concern		+										+																									
Black Kite <sup>(2)(9)</sup>	<i>Milvus migrans</i>	Common resident and winter visitor	W,R	(RC)	Class II	-	Least Concern	Least Concern	+	+										+	+	+	+												+	+									
Black-collared Starling	<i>Gracupica nigricollis</i>	Common resident	R	-	-	-	Least Concern	Least Concern		+	+									+	+	+	+																						
Black-crowned Night Heron <sup>(9)</sup>	<i>Nycticorax nycticorax</i>	Common resident and winter visitor	P	(LC)	-	-	Least Concern	Least Concern		+	+	+																																	
Black-faced Bunting	<i>Emberiza spodocephala</i>	Common winter visitor and passage migrant	M,W	-	-	-	Least Concern	Least Concern																																					
Black-faced Spoonbill <sup>(9)</sup>	<i>Platalea minor</i>	Common winter visitor	W	PGC	Class II	Endangered	Endangered	Endangered		+																													+						
Black-headed Gull <sup>(9)</sup>	<i>Chroicocephalus ridibundus</i>	Common winter visitor	W	PRC	-	-	Least Concern	Least Concern		++																																			
Black-winged Cuckoo-shrike	<i>Lalage melasthmostos</i>	Scarce passage migrant and winter visitor	AM,W	-	-	-	Least Concern	Least Concern																																					
Black-winged Kite <sup>(2)</sup>	<i>Elanus caeruleus</i>	Occasional visitor	O	LC	Class II	Vulnerable	Near Threatened	Least Concern												+																									
Black-winged Stilt <sup>(9)</sup>	<i>Himantopus himantopus</i>	Common	W	RC	-	-	Least Concern	Least Concern	+	++	+										+	++++	+																						
Blue Whistling Thrush	<i>Myophonus caeruleus</i>	Common resident	R	-	-	-	Least Concern	Least Concern																																					
Carriion Crow	<i>Corvus corone</i>	Rare	-	-	-	-	Least Concern	Least Concern																																					
Chestnut-eared Bunting	<i>Emberiza fucata</i>	Scarce passage migrant	M	LC	-	-	Least Concern	Least Concern																																					
Chinese Blackbird	<i>Turdus mandarinus</i>	Common winter visitor	W,M	-	-	-	Least Concern	Least Concern																																					
Chinese Bulbul	<i>Pycnonotus sinensis</i>	Abundant resident	R	-	-	-	Least Concern	Least Concern		+										+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Chinese Hwamei <sup>(2)</sup>	<i>Garrulax canorus</i>	Common resident	R	-	-	-	Near Threatened	Least Concern																																					
Chinese Pond Heron <sup>(9)</sup>	<i>Ardeola bacchus</i>	Common resident	P	PRC (RC)	-	-	Least Concern	Least Concern	+	+	+++	+	+							+	+	+++	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Cinerous Tit	<i>Parus cinereus</i>	Common resident	R	-	-	-	Least Concern	Least Concern	+	+	+	+								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Collared Crow <sup>(9)</sup>	<i>Corvus torquatus</i>	Uncommon resident	R	LC	-	-	Near Threatened	Vulnerable		+																																			
Collared Scops Owl <sup>(2)</sup>	<i>Otus lettia</i>	Common resident	R	-	Class II	-	Least Concern	Least Concern												+	+																								
Common Emerald Dove	<i>Chalcophaps indica</i>	Scarce but widespread resident	R	-	-	-	Vulnerable	Least Concern																																					
Common Greenshank <sup>(9)</sup>	<i>Tringa nebularia</i>	Abundant passage migrant and winter visitor	M,W	RC	-	-	Least Concern	Least Concern		+		+																																	
Common Kestrel <sup>(2)</sup>	<i>Falco tinnunculus</i>	Common autumn migrant and winter visitor	AM,W	-	Class II	-	Least Concern	Least Concern		+																																			
Common Kingfisher <sup>(9)</sup>	<i>Alcedo atthis</i>	Common passage migrant and winter visitor	AM,P	-	-	-	Least Concern	Least Concern		+																																			
Common Moorhen <sup>(9)</sup>	<i>Gallinula chloropus</i>	Common resident	R	-	-	-	Least Concern	Least Concern		+		+																																	
Common Myna	<i>Acridotheres tristis</i>	Uncommon resident	R	-	-	-	Least Concern	Least Concern																																					



#### **Appendix 10.4B: Avifauna Species Recorded within the Southern Portion of the Assessment Area**

**Appendix 10.4B: Avifauna Species Recorded within the Southern Portion of the Assessment Area**

Common Name <sup>(1)</sup>	Scientific Name	Distribution in Hong Kong <sup>(2)</sup>	Principal Status <sup>(3)</sup>	Level of Concern <sup>(4)</sup>	Protection Status in China <sup>(5)</sup>	China Red Data Book <sup>(6)</sup>	Red List of China's Vertebrates <sup>(7)</sup>	IUCN Red List (Version 2022.2) <sup>(8)</sup>	Project Area															Assessment Area Area																		
									MAR	PO	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL	V/O	DA	IF	MAR	PO	NWC	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL	V/O	DA	IF			
Scaly-breasted Munia	<i>Lonchura punctulata</i>	Common resident	R	-	-	-	Least Concern	Least Concern	+	+	+	+		++					+	+				+		+	+		++					+	+							
Scarlet Minivet	<i>Pericrocotus speciosus</i>	Common resident	R	-	-	-	Least Concern	Least Concern							+																											
Scarlet-backed Flowerpecker	<i>Dicaeum cruentatum</i>	Common resident	R	-	-	-	Least Concern	Least Concern																																		
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	Uncommon resident	R	-	-	-	Least Concern	Least Concern																																		
Spotted Dove	<i>Spilopelia chinensis</i>	Abundant resident	R	-	-	-	Least Concern	Least Concern	+	+	+				+	+	+	+	+++	++		+	+	+																		
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	Common passage migrant and winter visitor	W,M	-	-	-	Least Concern	Least Concern							+					+																						
Streak-breasted Scimitar Babbler	<i>Pomatorhinus ruficollis</i>	Common resident	R	-	-	-	Least Concern	Least Concern								+																										
Velvet-fronted Nuthatch	<i>Sitta frontalis</i>	Common resident	R	-	-	-	Data Deficient	Least Concern																																		
Verditer Flycatcher	<i>Eumyiias thalassinus</i>	Scarce winter visitor	W	-	-	-	Least Concern	Least Concern									+																									
White Wagtail	<i>Motacilla alba</i>	Common passage migrant and winter visitor	W,R	-	-	-	Least Concern	Least Concern	+	+	++				+						+			+	+	++																
White-breasted Waterhen <sup>(9)</sup>	<i>Amaurornis phoenicurus</i>	Common resident	R	-	-	-	Least Concern	Least Concern	+	+	+	+	+	+						+			+	+	+	+	+															
White-shouldered Starling	<i>Sturnia sinensis</i>	Common passage migrant	M,W,Su	(LC)	-	-	Least Concern	Least Concern	+												+			+																		
White-throated Kingfisher <sup>(9)</sup>	<i>Halcyon smyrnensis</i>	Common resident	AM,P	(LC)	-	-	Least Concern	Least Concern													+																					
Wood Sandpiper <sup>(9)</sup>	<i>Tringa glareola</i>	Common passage migrant and winter visitor	M,W	LC	-	-	Least Concern	Least Concern			+																															
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	Common resident	R	-	-	-	Least Concern	Least Concern	+	+				+						+	+		+	+																		
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	Common winter visitor and spring migrant	W	-	-	-	Least Concern	Least Concern													+																					
Total no. of species									18	7	35	5	1	1	31	19	18	5	16	20	36	21	7	18	8	2	35	5	1	1	31	29	24	11	22	24	36	22	8			

Note:

(1) All wild birds are Protected under Wild Animals Protection Ordinance (Cap. 170).

(2) AFCD (2022). Hong Kong Biodiversity Database.

(3) Carey *et al.* (2001): R=resident; W=winter visitor; Su=summer visitor; M=migrant; A=autumn; P=present all year, exact composition unknown; ?W=extent of migration in winter is unclear

(4) Fellowes, J.R., Lau, M.W.N., Dudgeon, D., Reels, G.T., Ades, G.W.J., Carey, G.J., Chan, B.P.L., Kendrick, R.C., Lee, K.S., Leven, M.R., Wilson, K.D.P. & Yu, Y.T. (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. Memoirs of the Hong Kong Natural History Society 25:123-159.

LC=Local Concern; PRC=Potential Regional Concern; RC=Regional Concern; PGC=Potential Global Concern.

Memoirs of the Hong Kong Natural History Society 25:123-159. LC=Local Concern; PRC=Potential Regional Concern; RC=Regional Concern; PGC=Potential Global Concern; GC=Global Concern.

Letters in parentheses indicate that the assessment is on the basis of restrictedness in nesting and/or roosting sites rather than in general occurrence.

(5) List of Wild Animals Under State Protection (promulgated by State Forestry Administration and Ministry of Agriculture on 14 January, 1989).

(6) Zheng, G. M. and Wang, Q. S. (1998). China Red Data Book. Aves.

(7) Jiang *et al.* (2016). Red List of China's Vertebrates.

(8) IUCN (2022). The IUCN Red List of Threatened Species. Version 2022.02.

(9) Wetland-dependent species (including wetland-dependent species and waterbirds).

Abbreviation for Habitats: MAR=Marsh / Reed; PO=Pond; NWC=Natural Watercourse; MWC=Modified Watercourse; SNWC=Semi-natural Watercourse; SWG=Seasonally Wet Grassland; WAL=Wet Agricultural Land; DAL=Dry Agricultural Land; WL=Woodland; MWL=Mixed Woodland; PL=Plantation; SL=Shrubland; GL=Grassland; V/O=Village / Orchard; DA=Developed Area / Wasteland

Code for Abundance: +++++=Dominant; ++++=Abundant; +++=Frequent; ++=Occasional; +=Scarce

Species of conservation importance is in bold type face

Appendix 10.4C: Mammal Species Recorded within the Northern Portion of the Assessment Area

Common Name	Scientific Name	Distribution in Hong Kong <sup>(3)</sup>	Level of Concern <sup>(4)</sup>	Protection Status in China <sup>(5)</sup>	China Red Data Book <sup>(6)</sup>	Red List of China's Vertebrates <sup>(7)</sup>	IUCN Red List (Version 2022.2) <sup>(8)</sup>	Project Area												Assessment Area																
								MIT	MAR	PO	NWC	MWC	SNWC	DAL	WL	MWL	PL	GL	V/O	DA	MIT	MAR	PO	NWC	MWC	SNWC	SWG	DAL	WL	MWL	PL	SL	GL	V/O	DA	
<b>Bats</b>																																				
Chinese Horseshoe Bat <sup>(1)</sup>	<i>Rhinolophus sinicus</i>	Very Common	-	-	-	Least Concern	Least Concern																												+	
Chinese Noctule <sup>(1)</sup>	<i>Nyctalus plancyi</i>	Common	PRC, (RC)	-	-	Least Concern	Least Concern																												+	
Himalayan Leaf-nosed Bat <sup>(1)</sup>	<i>Hipposideros armiger</i>	Very Common	(LC)	-	-	Least Concern	Least Concern																												+	
Intermediate Horseshoe Bat <sup>(1)</sup>	<i>Rhinolophus affinis</i>	Uncommon	(LC)	-	-	Least Concern	Least Concern																													
Japanese Pipistrelle <sup>(1)</sup>	<i>Pipistrellus abramus</i>	Very Common	-	-	-	Least Concern	Least Concern	+	+	+																									+++	
Lesser Bamboo Bat <sup>(1)</sup>	<i>Tylonycteris fulvida</i>	Very Common	(LC)	-	Rare	Least Concern	Least Concern	+	+	+	+																								++	
Short-nosed Fruit Bat <sup>(1)</sup>	<i>Cynopterus sphinx</i>	Very Common	-	-	Indeterminate	Near Threatened	Least Concern	+	+																										+	
Unknown Myotis Species <sup>(1)</sup>	<i>Myotis spp.</i>	-	-	-	-	-	-																													+
Unknown Vespertilionidae species 1 <sup>(1)</sup>	-	-	-	-	-	-	-																													+
Unknown Vespertilionidae species 2 <sup>(1)</sup>	-	-	-	-	-	-	-																													+
<b>Other Non-flying Mammals</b>																																				
Chestnut Spiny Rat	<i>Niviventer fulvescens</i>	Very Common	-	-	-	Least Concern	Least Concern																												+	
Eurasian Wild Pig	<i>Sus scrofa</i>	Very Common	-	-	-	Least Concern	Least Concern	+			+	+																						+		
Grey Shrew	<i>Crocidura attenuata</i>	Uncommon	-	-	-	Least Concern	Least Concern																												++	
House Mouse	<i>Mus musculus</i>	Widely distributed in urban areas related to human activities	-	-	-	Least Concern	Least Concern																													+
Indochinese Forest Rat	<i>Rattus andamanensis</i>	Very Common	-	-	-	Least Concern	Least Concern																													+
Leopard Cat <sup>(1)(2)</sup>	<i>Prionailurus bengalensis</i>	Uncommon	-	-	Vulnerable	Vulnerable	Least Concern																													
Pallas's Squirrel <sup>(1)</sup>	<i>Callosciurus erythraeus styani</i>	Common; New Territories population	-	-	-	Least Concern	Least Concern																													+
Small Asian Mongoose <sup>(1)</sup>	<i>Herpestes javanicus</i>	Uncommon	-	-	-	Vulnerable	Least Concern																													+
Small Indian Civet <sup>(1)</sup>	<i>Viverricula indica</i>	Very Common	-	Class II	-	Vulnerable	Least Concern	+		+																									++++	
Total no. of species								5	0	6	0	7	2	0	0	0	1	0	3	13	6	3	11	1	7	8	0	0	4	1	4	3	8	6	15	

Common Name	Scientific Name	Distribution in Hong Kong <sup>(2)</sup>	Level of Concern <sup>(3)</sup>	Protection Status in China <sup>(4)</sup>	China Red Data Book <sup>(5)</sup>	Red List of China's Vertebrates <sup>(6)</sup>	IUCN Red List (Version 2022.2) <sup>(7)</sup>	Camera Trap											
								CT1	CT2	CT6	CT7	CT8	CT9	CT10	CT11	CT19	CT20		
<b>Camera Trap</b>																			
Chestnut Spiny Rat	<i>Niviventer fulvescens</i>	Very Common	-	-	Least Concern	Least Concern	+												
Eurasian Wild Pig	<i>Sus scrofa</i>	Very Common	-	-	Least Concern	Least Concern	++	+	+										++
Grey Shrew	<i>Crocidura attenuata</i>	Uncommon	-	-	Least Concern	Least Concern	+												
House Mouse	<i>Mus musculus</i>	Widely distributed in urban areas related to human activities	-	-	Least Concern	Least Concern		+											
Indochinese Forest Rat	<i>Rattus andamanensis</i>	Very Common	-	-	Least Concern	Least Concern	+												
Leopard Cat <sup>(1)(2)</sup>	<i>Prionailurus bengalensis</i>	Uncommon	-	-	Vulnerable	Vulnerable	Least Concern												+
Pallas's Squirrel <sup>(1)</sup>	<i>Callosciurus erythraeus styani</i>	Common; New Territories population	-	-	Least Concern	Least Concern			+										
Small Asian Mongoose <sup>(1)</sup>	<i>Herpestes javanicus</i>	Uncommon	-	-	Vulnerable	Least Concern	+	+											
Small Indian Civet <sup>(1)</sup>	<i>Viverricula indica</i>	Very Common	-	Class II	-	Vulnerable	Least Concern	++	+	+	+	+	+	+					2

Appendix 10.4D: Mammal Species Recorded within the Southern Portion of the Assessment Area

Common Name	Scientific Name	Distribution in Hong Kong <sup>(2)</sup>	Level of Concern <sup>(3)</sup>	Protection Status in China <sup>(4)</sup>	China Red Data Book <sup>(5)</sup>	Red List of China's Vertebrates <sup>(6)</sup>	IUCN Red List (Version 2022.2) <sup>(7)</sup>	Project Area												Assessment Area																
								MAR	PO	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL	V/O	DA	MAR	PO	NWC	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL	V/O	DA
<b>Bats</b>																																				
Chinese Noctule <sup>(1)</sup>	<i>Nyctalus planzyi</i>	Common	PRC, (RC)	-	-	Least Concern	Least Concern			+										+	+				+							+	+			
Himalayan Leaf-nosed Bat <sup>(1)</sup>	<i>Hipposideros armiger</i>	Very Common	(LC)	-	-	Least Concern	Least Concern			+					+																					
Intermediate Horseshoe Bat <sup>(1)</sup>	<i>Rhinolophus affinis</i>	Uncommon	(LC)	-	-	Least Concern	Least Concern	+																												
Japanese Pipistrelle <sup>(1)</sup>	<i>Pipistrellus abramus</i>	Very Common	-	-	-	Least Concern	Least Concern		++++	+			+		+		+		++	++++			+	++	+			+	+	+	+	++				
Least Horseshoe Bat <sup>(1)</sup>	<i>Rhinolophus pusillus</i>	Uncommon	PRC, (RC)	-	-	Least Concern	Least Concern			+																										
Lesser Bamboo Bat <sup>(1)</sup>	<i>Tylonycteris fulvida</i>	Very Common	(LC)	-	Rare	Least Concern	Least Concern	+	++	+			+		+		+		+++		+		+	+				+	+	+	+	+				
Short-nosed Fruit Bat <sup>(1)</sup>	<i>Cynopterus sphinx</i>	Very Common	-	-	Indeterminate	Near Threatened	Least Concern			+										+																
Unknown Vesperilionidae species 1 <sup>(1)</sup>	-	-	-	-	-	-	-		++	+					+				++	++			+	+								+	+			
Unknown Vesperilionidae species 2 <sup>(1)</sup>	-	-	-	-	-	-	-		+						+				++	+++			+										+	+		
<b>Other Non-Flying Mammals</b>																																				
East Asian Porcupine <sup>(1)</sup>	<i>Hystrix brachyura</i>	Very Common	PGC	-	-	Least Concern	Least Concern												+	+																
Eurasian Wild Pig	<i>Sus scrofa</i>	Very Common	-	-	-	Least Concern	Least Concern												+++	+	++++															
Leopard Cat <sup>(1)(2)</sup>	<i>Prionailurus bengalensis</i>	Uncommon	-	-	Vulnerable	Vulnerable	Least Concern											+	+	+																
Masked Palm Civet <sup>(1)</sup>	<i>Paguma larvata</i>	Common	PRC	-	-	Near Threatened	Least Concern																													
Pallas's Squirrel <sup>(1)</sup>	<i>Callosciurus erythraeus styani</i>	Common; New Territories population	-	-	-	Least Concern	Least Concern			+	+								+	+													+	+		
Red Muntjac	<i>Muntiacus muntjak</i>	Very Common	PRC	-	-	Near Threatened	Least Concern											+	+	+																
Small Indian Civet <sup>(1)</sup>	<i>Viverricula indica</i>	Very Common	-	Class II	-	Vulnerable	Least Concern												+																	
Total no. of species								1	1	8	5	0	0	2	2	9	2	8	0	7	6	1	1	1	8	5	0	0	2	10	9	3	9	0	7	6

Common Name	Scientific Name	Distribution in Hong Kong <sup>(2)</sup>	Level of Concern <sup>(3)</sup>	Protection Status in China <sup>(4)</sup>	China Red Data Book <sup>(5)</sup>	Red List of China's Vertebrates <sup>(6)</sup>	IUCN Red List (Version 2022.2) <sup>(7)</sup>	Camera Trap									
								CT3	CT4	CT5	CT12	CT13	CT14	CT15	CT16	CT17	CT18
<b>East Asian Porcupine<sup>(1)</sup></b>																	
East Asian Porcupine <sup>(1)</sup>	<i>Hystrix brachyura</i>	Very Common	PGC	-	-	Least Concern	Least Concern	+	+		+						
Eurasian Wild Pig	<i>Sus scrofa</i>	Very Common	-	-	-	Least Concern	Least Concern	+++	++++		+						
Leopard Cat <sup>(1)(2)</sup>	<i>Prionailurus bengalensis</i>	Uncommon	-	-	Vulnerable	Vulnerable	Least Concern	+	+		+		+		++	+++	
Masked Palm Civet <sup>(1)</sup>	<i>Paguma larvata</i>	Common	PRC	-	-	Near Threatened	Least Concern	+									
Pallas's Squirrel <sup>(1)</sup>	<i>Callosciurus erythraeus styani</i>	Common; New Territories population	-	-	-	Least Concern	Least Concern										
Red Muntjac	<i>Muntiacus muntjak</i>	Very Common	PRC	-	-	Near Threatened	Least Concern	+	+		+	+	+	+	+	+	
Small Indian Civet <sup>(1)</sup>	<i>Viverricula indica</i>	Very Common	-	Class II	-	Vulnerable	Least Concern	+	+								
Total no. of species								6	5	0	4	1	2	2	1	2	2

## Notes:

(1) Protected under Wild Animals Protection Ordinance (Cap. 170).

(2) AFCD (2022). Hong Kong Biodiversity Database.

(3) Fellowes, J.R., Lau, M.W.N., Dudgeon, D., Reels, G.T., Ades, G.W.J., Carey, G.J., Chan, B.P.L., Kendrick, R.C., Lee, K.S., Leven, M.R., Wilson, K.D.P. &amp; Yu, Y.T. (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. Memoirs of the Hong Kong Natural History Society 25:123-159: LC=Local Concern; PRC=Potential Regional Concern; RC=Regional Concern; PGC=Potential Global Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in nesting and/or roosting sites rather than in general occurrence.

(4) List of Wild Animals Under State Protection (promulgated by State Forestry Administration and Ministry of Agriculture on 14 January, 1989).

(5) Wang, S. (1998). China Red Data Book of Endangered Animals. Mammalia. First Edition. Beijing: Science Press.

(6) Jiang, Z.G., et al. (2016). Red List of China's Vertebrates. Biodiversity Science 24(5): 500-551.

(7) IUCN (2022). The IUCN Red List of Threatened Species. Version 2022.02.

Abbreviations for Habitats: MAR=Marsh / Reed; PO=Pond; NWC=Natural Watercourse; MWC=Modified Watercourse; SNWC=Semi-natural Watercourse; SWG=Seasonally Wet Grassland; WAL=Wet Agricultural Land; DAL=Dry Agricultural Land; WL=Woodland; MWL=Mixed Woodland; PL=Plantation; SL=Shrubland; GL=Grassland; V/O=Village / Orchard; DA=Developed Area / Wasteland

Code for Abundance: +++++=Dominant; ++++=Abundant; +++=Frequent; +=Occasional; +=Scarce

#### **Appendix 10.4E: Butterfly Species Recorded within the Northern Portion of the Assessment Area**

## **Notes:**

(1) Agriculture, Fisheries and Conservation Department (AFCD) (2020). Hong Kong Biodiversity Database.

(2) Fellowes, J.R., Lau, M.W.N., Dudgeon, D., Reels, G.T., Ades, G.W.J., Carey, G.J., Chan, B.P.L., Kendrick, R.C., Lee, K.S., Leven, M.R., Wilson, K.D.P. & Yu, Y.T. (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. Memoirs of the Hong Kong Natural History Society 25:123-159: LC=Local Concern; PRC=Potential Regional Concern; RC=Regional Concern; PGC=Potential Global Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in nesting and/or roosting sites rather than in general occurrence.

(3) IUCN (2022). The IUCN Red List of Threatened Species. Version 2022.02

Abbreviation for Habitats: MIT=Mitigation Wetland; MAR=Marsh / Reed; PO=Pond; NWC=Natural Watercourse; MWC=Modified Watercourse; SNWC=Semi-natural Watercourse; SWG=Seasonally Wet Grassland; DAL=Dry Agricultural Land; WL=Woodland; MWL=Mixed Woodland; PL=Plantation; SL=Shrubland; GL=Grassland; V/O=Village / Orchard; DA=Developed Area / Wasteland

Code for Abundance: +++++=Dominant; ++++=Abundant; +++=Frequent; ++=Occasional; +=Scarce

Species of conservation importance is in **bold** type face

Appendix 10.4F: Butterfly Species Recorded within the Southern Portion of the Assessment Area

Common Name	Scientific Name	Distribution in Hong Kong <sup>(3)</sup>	Level of Concern <sup>(4)</sup>	IUCN Red List (Version 2022.2) <sup>(5)</sup>	Project Area													Assessment Area														
					MAR	PO	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL	V/O	DA	MAR	PO	NWC	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL	V/O
-	<i>Catopsilia spp.</i>	-	-	-																									+			
-	<i>Eurema spp.</i>	-	-	-					+																					+ + + + +		
-	<i>Pieris spp.</i>	-	-	-																										+ + +		
-	<i>Telicota sp.</i>	-	-	-																											+ + +	
Angled Castor	<i>Ariadne ariadne alterna</i>	Common	-	-																											+ + + + +	
Banana Skipper	<i>Erionota torus</i>	Uncommon	-	-																											+ + + + +	
Banded Tree Brown	<i>Lethe confusa confusa</i>	Common	-	-																										+ + + + +		
Black Prince	<i>Rohana parisatis staurakius</i>	Common	-	-																										+ + + + +		
Blue Admiral	<i>Kaniska canace canace</i>	Common	-	-																										+ + + + +		
Blue Tiger	<i>Tirumala limniace limniace</i>	Common	-	-																										+ + + + +		
Blue-spotted Crow	<i>Euploea midamus midamus</i>	Very common	-	-																										+ + + + +		
Broad Spark	<i>Sinthusa chandrana grotei</i>	Rare	-	-																										+ + + + +		
Bush Hopper	<i>Ampittia dioscorides etura</i>	Uncommon	-	-																										+ + + + +		
Chestnut Bob	<i>Iambrix salsala salsala</i>	Uncommon	-	-																										+ + + + +		
Chinese Peacock	<i>Papilio bianor bianor</i>	Common	-	-																										+ + + + +		
Chocolate Pansy	<i>Junonia iphita iphita</i>	Common	-	-																										+ + + + +		
Club Silverline	<i>Spindasis syama peguana</i>	Uncommon	-	-																										+ + + + +		
Colour Sergeant	<i>Athyma nefte seitzi</i>	Common	-	-																										+ + + + +		
Common Archduke	<i>Lexias pardalis</i>	Unknown; First recorded in 2008, monitoring underway	-	-																										+ + + + +		
Common Birdwing <sup>(1)(2)</sup>	<i>Troides helena spilotia</i>	Uncommon	-	-																										+ + + + +		
Common Bluebottle	<i>Graphium sarpedon sarpedon</i>	Very common	-	-					+	+																				+ + + + +		
Common Duffer	<i>Discophora sondaica tulliana</i>	Uncommon	-	-																										+ + + + +		
Common Evening Brown	<i>Melanitis leda leda</i>	Common	-	-																										+ + + + +		
Common Five-ring	<i>Ypthima baldus baldus</i>	Very common	-	-																										+ + + + +		
Common Grass Yellow	<i>Eurema hecabe hecabe</i>	Very common	-	-																										+ + + + +		
Common Hedge Blue	<i>Acrolepis puspa gisca</i>	Common	-	-																										+ + + + +		
Common Indian Crow	<i>Euploea core amymone</i>	Common	-	-	Least Concern																								+ + + + +			
Common Jay	<i>Graphium doson axion</i>	Common	-	-																										+ + + + +		
Common Jester	<i>Symbrenthia lilaea lunica</i>	Common	-	-																										+ + + + +		
Common Mapwing	<i>Cyrestis thyodamas chinensis</i>	Common	-	-																										+ + + + +		
Common Mime	<i>Chilasa clytia clytia</i>	Common	-	-					+																					+ + + + +		
Common Mormon	<i>Papilio polytes polytes</i>	Very common	-	-						+																			+ + + + +			
Common Palmfly	<i>Elymnias hypermnestra hainana</i>	Common	-	-																										+ + + + +		
Common Rose	<i>Pachliopta aristolochiae goniopeiltis</i>	Rare	-	-																										+ + + + +		
Common Sailer	<i>Neptis hydas hydas</i>	Very common	-	-																										+ + + + +		
Common Sergeant	<i>Athyma perius perius</i>	Uncommon	-	-																										+ + + + +		
Courtesan	<i>Euripus nyctelius</i>	Very rare	-	-																										+ + + + +		
Danaid Eggfly	<i>Hypolimnas misippus</i>	Uncommon	LC	-																										+ + + + +		
Dark Brand Bush Brown	<i>Mycalesis mineus mineus</i>	Very common	-	-																										+ + + + +		
Dark Brown Ace																															+ + + + +	
Dark Cerulean	<i>Jamides bochus bochus</i>	Common	-	-																										+ + + + +		
Dark Evening Brown	<i>Melanitis phedima muskata</i>	Uncommon	-	-																										+ + + + +		
Dark Grass Blue	<i>Zizeeria karsandra karsandra</i>	Uncommon																														

Appendix 10.4F: Butterfly Species Recorded within the Southern Portion of the Assessment Area

Common Name	Scientific Name	Distribution in Hong Kong <sup>(3)</sup>	Level of Concern <sup>(4)</sup>	IUCN Red List (Version 2022.2) <sup>(5)</sup>	Project Area													Assessment Area													
					MAR	PO	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL	V/O	DA	MAR	PO	NWC	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL
Short-banded Sailer	<i>Phaedyma columella columella</i>	Common	-	-																											
Small Cabbage White	<i>Pieris rapae crucivora</i>	Rare	-	-					+			++++																			
Small Three-ring	<i>Ypthima norma norma</i>	Very rare	LC	-																											
South China Bush Brown	<i>Mycalesis zonata</i>	Common	-	-																											
Southern Sulphur Sailer	<i>Neptis clinia susruta</i>	Common	-	-																											
Spangle	<i>Papilio protenor protenor</i>	Very common	-	-					+																						
Straight Five-ring	<i>Ypthima lisandra lisandra</i>	Common	-	-																											
Swallowtail	<i>Papilio xuthus xuthus</i>	Rare	-	-																											
Tailed Cupid	<i>Everes lacturnus rileyi</i>	Common	-	-																											
Tailed Jay	<i>Graphium agamemnon agamemnon</i>	Common	-	-					+																						
Tailless Lineblue	<i>Prosotas dubiosa</i>	-	-	-					+																						
Tawny Rajah	<i>Charaxes bernardus bernardus</i>	Common	-	-																											
Three-spot Grass Yellow	<i>Eurema blanda hylama</i>	Common	-	-																											
Tiny Grass Blue	<i>Zizula hylax</i>	Very rare	-	-																											
Transparent 6-line Blue	<i>Nacaduba kurava euplea</i>	Common	-	-																											
Water Snow Flat	<i>Tagiades litigiosus litigiosus</i>	Common	-	-																											
White-edged Blue Baron	<i>Euthalia pheinius seitzi</i>	Common	-	-																											
Yellow Dart	<i>Potanthus pava pava</i>	Very rare	-	-																											

Total no. of species

7 2 13 2 2 0 14 20 17 12 30 9 41 22 7 2 2 13 2 2 0 14 33 26 33 44 38 45 22

Notes:

(1) Protected under Wild Animals Protection Ordinance (Cap. 170).

(2) Protected under Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).

(3) Agriculture, Fisheries and Conservation Department (AFCD) (2020). Hong Kong Biodiversity Database.

(4) Fellowes, J.R., Lau, M.W.N., Dudgeon, D., Reels, G.T., Ades, G.W.J., Carey, G.J., Chan, B.P.L., Kendrick, R.C., Lee, K.S., Leven, M.R., Wilson, K.D.P. & Yu, Y.T. (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. Memoirs of the Hong Kong Natural History Society 25:123-159: LC=Local Concern; PRC=Potential Regional Concern; RC=Regional Concern; PGCC=Potential Global Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in nesting and/or roosting sites rather than in general occurrence.

(5) IUCN (2022). The IUCN Red List of Threatened Species. Version 2022.02.

Abbreviation for Habitats: MAR=Marsh / Reed; PO=Pond; NWC=Natural Watercourse; MWC=Modified Watercourse; SNWC=Semi-natural Watercourse; SWG=Seasonally Wet Grassland; WAL=Wet Agricultural Land; DAL=Dry Agricultural Land; WL=Woodland; MWL=Mixed Woodland; PL=Plantation; SL=Shrubland; GL=Grassland; V/O=Village / Orchard; DA=Developed Area / Wasteland

Code for Abundance: +++++=Dominant; ++++=Abundant; +++=Frequent; ++=Occasional; +=Scarce

Species of conservation importance is in **bold** type face

**Appendix 10.4G: Odonate Species Recorded within the Northern Portion of the Assessment Area**

Common Name	Scientific Name	Distribution in Hong Kong <sup>(1)</sup>	Level of Concern <sup>(2)</sup>	IUCN Red List (Version 2022.2) <sup>(3)</sup>	Project Area													Assessment Area																	
					MIT	MAR	PO	NWC	MWC	SNWC	DAL	WL	MWL	PL	GL	V/O	DA	MIT	MAR	PO	NWC	MWC	SNWC	SWG	DAL	WL	MWL	PL	SL	GL	V/O	DA			
-	<i>Orthetrum sp.</i>	-	-	-			+													+															
Amber-winged Glider	<i>Hydrobasileus croceus</i>	Common; Widespread	-	Least Concern																															
Asian Amberwing	<i>Brachythemis contaminata</i>	Abundant; Scattered	-	Least Concern	+	+++		++										+	+++	+	+														
Black Threadtail	<i>Prodasineura autumnalis</i>	Abundant; Widespread	-	Least Concern			+												+																
Black-kneed Featherlegs	<i>Pseudocopera ciliata</i>	Common; Widespread	-	Least Concern					+												+														
Blue Chaser	<i>Potamarcha congener</i>	Common; Scattered	LC	Least Concern																	+			+											
Blue Dasher	<i>Brachydiplax chalybea flavovittata</i>	Common; Widespread	-	Least Concern			+											+	+		+			+	+										
Blue Percher	<i>Diplacodes trivialis</i>	Abundant; Sparse	-	Least Concern			+												+		+														
Coastal Glider	<i>Macrodiplax cora</i>	Common; Sparse	LC	Least Concern		+++													++																
Common Blue Skimmer	<i>Orthetrum glaucum</i>	Abundant; Very Widespread	-	Least Concern			+		+										+		+					+			+						
Common Bluetail	<i>Ischnura senegalensis</i>	Abundant; Scattered	-	Least Concern	+	+		+										+	++	+	+	+								+++					
Common Evening Hawker	<i>Anaciaeschna jaspidea</i>	Common; Sparse	-	Least Concern															+																
Common Flangetail	<i>Ictinogomphus pertinax</i>	Common; Widespread	-	Least Concern	+	++												+	+																
Common Red Skimmer	<i>Orthetrum pruinatum neglectum</i>	Abundant; Widespread	-	Least Concern	+	+	+		+									+	+	+	+				+	+									
Crimson Darter	<i>Crocothemis servilia servilia</i>	Abundant; Scattered	-	Least Concern		+		+										+	+	+					+					+					
Crimson Dropwing	<i>Trithemis aurora</i>	Abundant; Very Widespread	-	Least Concern															+																
Dingy Dusk-darter	<i>Zyxomma petiolatum</i>	Common; Scattered	-	Least Concern					+										+																
Evening Skimmer	<i>Tholymis tillarga</i>	Common; Scattered	-	Least Concern																										+					
Forest Chaser	<i>Lyriothemis elegantissima</i>	Common; Widespread	-	Least Concern					+											+															
Green Skimmer	<i>Orthetrum serapia</i>	Abundant; Widespread	-	Least Concern	+	++	+			+								+	+	++	+	+			+					+	+				
Indigo Dropwing	<i>Trithemis festiva</i>	Abundant; Widespread	-	Least Concern	+														+																
Lesser Blue Skimmer	<i>Orthetrum triangulare triangulare</i>	Common; Widespread	-	Least Concern	+														+																
Lesser Emperor	<i>Anax parthenope</i>	Common; Scattered	-	Least Concern	+	+		+										+	+	+	+														
Mangrove Skimmer	<i>Orthetrum poecilops</i>	Uncommon; Scattered	GC	Vulnerable B2ab(ii,iii)					+												+														
Marsh Skimmer	<i>Orthetrum luzonicum</i>	Abundant; Widespread	-	Least Concern															+																
Orange-tailed Sprite	<i>Ceriagrion auranticum</i>	Abundant; Very Widespread	-	Least Concern	+	+	+		+									+	+	+	+	+													
Pale-spotted Emperor	<i>Anax guttatus</i>	Common; Scattered	-	Least Concern															+																
Pied Percher	<i>Neurothemis tullia tullia</i>	Common; Widespread	-	Least Concern	+				+										+																
Pied Skimmer	<i>Pseudothemis zonata</i>	Common; Very Widespread	-	Least Concern	+		+		+										+	+	+	+	+			+		+							
Red-faced Skimmer	<i>Orthetrum chrysostigma</i>	Abundant; Very Widespread	-	Least Concern					+										+		+														
Russet Percher	<i>Neurothemis fulvia</i>	Common; Widespread	-	Least Concern					+		+								+		+														
Saddlebag Glider	<i>Tramea virginia</i>	Abundant; Widespread	-	Least Concern					+			+							+	++	+		+			+						+	+		
Scarlet Basker	<i>Urothemis signata signata</i>	Common; Scattered	LC	Least Concern					+										+	+	+														
Variegated Flutterer	<i>Rhyothemis variegata arria</i>	Common; Widespread	-	Least Concern	+	++++	+			+								++	+	++	++++	+	+	+		+			+	+	+				
Wandering Glider	<i>Pantala flavescens</i>	Abundant; Widespread	-	Least Concern	++	++		+	+									+	+	++	+	+++		+	+			+		+	+	+			
Wandering Midget	<i>Agriocnemis pygmaea</i>	Common; Sparse	-	Least Concern																															
Yellow Featherlegs	<i>Copera marginipes</i>	Abundant; Widespread	-	Least Concern	+	+		+	+	+								+		+	+	+	+												
					Total no. of species	14	1	22	3	17	2	3	0	0	1	0	1	4	14	8	26	5	22	7	0	12	6	1	4	0	5	3	6		

**Notes:**

(1) AFCD (2022). Hong Kong Biodiversity Database.

(2) Protected under Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).

**Appendix 10.4H: Odonate Species Recorded within the Southern Portion of the Assessment Area**

Common Name	Scientific Name	Distribution in Hong Kong <sup>(1)</sup>	Level of Concern <sup>(2)</sup>	IUCN Red List (Version 2022.2) <sup>(3)</sup>	Project Area												Assessment Area													
					MAR	PO	NWC	MWC	SNWC	WAL	DAL	WL	MWL	PL	SL	GL	V/O	DA	MAR	PO	NWC	MWC	SNWC	WAL	DAL	WL	MWL	PL	SL	GL
Amber-winged Glider	<i>Hydrobasileus croceus</i>	Common; Widespread	-	Least Concern										+													+			
Asian Amberwing	<i>Brachythemis contaminata</i>	Abundant; Scattered	-	Least Concern	+	+		+		+								+	+	+	+	+						+		+
Asian Pintail	<i>Acisoma panorpoides panorpoides</i>	Common; Widespread	-	Least Concern					+	+																	+			
Black Threadtail	<i>Prodasineura autumnalis</i>	Abundant; Widespread	-	Least Concern			+											+			+								+	
Black-kneed Featherlegs	<i>Pseudocopera ciliata</i>	Common; Widespread	-	Least Concern								+																		
Blue Dasher	<i>Brachydiplex chalybea flavovittata</i>	Common; Widespread	-	Least Concern		+			+						+				+		+							+		
Blue Percher	<i>Diplacodes trivialis</i>	Abundant; Sparse	-	Least Concern	+	+													+	+										
<b>Blue-spotted Dusk-hawker</b>	<b><i>Gynacantha japonica</i></b>	<b>Common; Sparse</b>	<b>LC</b>	<b>-</b>											+														<b>+</b>	
Common Blue Jewel	<i>Rhinocypha perforata</i>	Abundant; Very Widespread	-	Least Concern																										
Common Blue Skimmer	<i>Orthetrum glaucum</i>	Abundant; Very Widespread	-	Least Concern	+	+	+	+	+		+				+		+	+	+	+	+	+	+	+	+	+	+	+		
Common Bluetail	<i>Ischnura senegalensis</i>	Abundant; Scattered	-	Least Concern					+						+		+				+								+	
Common Flangetail	<i>Ictinogomphus pertinax</i>	Common; Widespread	-	Least Concern					+										+	+	+									
Common Red Skimmer	<i>Orthetrum pruinosum neglectum</i>	Abundant; Widespread	-	Least Concern	+			+++++	+				+				+	+	+	+	+	+	+	+	+	+	+	+		
Crimson Darter	<i>Crocothemis servilia servilia</i>	Abundant; Scattered	-	Least Concern		+	+			+	+				+		+	+	+	+	+	+	+	+	+	+	+	+		
Crimson Dropwing	<i>Trithemis aurora</i>	Abundant; Very Widespread	-	Least Concern					+	+					+		+												+	
Dancing Dropwing	<i>Trithemis pallidinervis</i>	Uncommon; Sparse	-	Least Concern																									+	
Evening Skimmer	<i>Tholymis tillarga</i>	Common; Scattered	-	Least Concern					+												+									
Forest Chaser	<i>Lyriothemis elegantissima</i>	Common; Widespread	-	Least Concern			+										+			+								+		
Green Skimmer	<i>Orthetrum serapia</i>	Abundant; Widespread	-	Least Concern				+++	+				+		+		+		+	+++	+					+	+	+		
Indigo Dropwing	<i>Trithemis festiva</i>	Abundant; Widespread	-	Least Concern				+	+									+		+								+		
Lesser Blue Skimmer	<i>Orthetrum triangulare triangulare</i>	Common; Widespread	-	Least Concern																										
Marsh Skimmer	<i>Orthetrum luzonicum</i>	Abundant; Widespread	-	Least Concern						+																				
Orange-tailed Sprite	<i>Ceriagrion auranticum</i>	Abundant; Very Widespread	-	Least Concern				+	+									+		+	+						+	+		
Pale-spotted Emperor	<i>Anax guttatus</i>	Common; Scattered	-	Least Concern							+																			
Pied Percher	<i>Neurothemis tullia tullia</i>	Common; Widespread	-	Least Concern	+														+											
Pied Skimmer	<i>Pseudothemis zonata</i>	Common; Very Widespread	-	Least Concern		+		+							+		+		+	+							+	+		
Red-faced Skimmer	<i>Orthetrum chrysostigma</i>	Abundant; Very Widespread	-	Least Concern					+	+					+													+		
Russet Percher	<i>Neurothemis fulvia</i>	Common; Widespread	-	Least Concern				+	+					+		+		+	+	+							+	+		
Saddlebag Glider	<i>Tramea virginia</i>	Abundant; Widespread	-	Least Concern					+				+				+										+	+		
<b>Scarlet Basker</b>	<b><i>Urothemis signata signata</i></b>	<b>Common; Scattered</b>	<b>LC</b>	<b>Least Concern</b>																								<b>+</b>		
Variegated Flutterer	<i>Rhyothemis variegata arria</i>	Common; Widespread	-	Least Concern	+	+		+		+	++				+	++		+	+	+		++					+	++		
Wandering Glider	<i>Pantala flavescens</i>	Abundant; Widespread	-	Least Concern	+			++++			+		+			+++	+++++	+	+	++++					+		++	+++	++++	
Yellow Featherlegs	<i>Copera marginipes</i>	Abundant; Widespread	-	Least Concern				+	+							+				+	+							+		

Total no. of species

7 7 8 17 10 4 5 1 3 1 10 1 16 4 7 11 10 17 11 4 5 2 5 4 16 8 16 5

**Notes:**

(1) AFCD (2022). Hong Kong Biodiversity Database.

(2) Protected under Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).

(3) IUCN (2022). The IUCN Red List of Threatened Species. Version 2022.02.

Abbreviation for Habitats: MAR=Marsh / Reed; PO=Pond; NWC=Natural Watercourse; MWC=Modified Watercourse; SNWC=Semi-natural Watercourse; SWG=Seasonally Wet Grassland; WAL=Wet Agricultural Land; DAL=Dry Agricultural Land; WL=Woodland; MWL=Mixed Woodland; PL=Plantation; SL=Shrubland; GL=Grassland; V/O=Village / Orchard; DA=Developed Area / Wasteland

Code for Abundance: ++++=Dominant; +++)=Abundant; ++=Frequent; ++=Occasional; +=Scarce

Species of conservation importance is in **bold** type face



Appendix 10.4J: Herpetofauna Species Recorded within the Southern Portion of the Assessment Area

Common Name	Scientific Name	Distribution in Hong Kong <sup>(1)</sup>	Level of Concern <sup>(2)</sup>	Protection Status in China <sup>(3)</sup>	China Red Data Book <sup>(4)</sup>	Red List of China's Vertebrates <sup>(5)</sup>	IUCN Red List (Version 2022.2) <sup>(6)</sup>	Project Area												Assessment Area																	
								MAR	PO	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL	V/O	DA	MAR	PO	NWC	MWC	SNWC	SWG	WAL	DAL	WL	MWL	PL	SL	GL	V/O	DA	
<b>Amphibian</b>																																					
Asian Common Toad	<i>Duttaphrynus melanostictus</i>	Widely distributed	-	-	-	-	-			+				+	+					+	+			+				+	+	+	+	+					
Asiatic Painted Frog	<i>Kaloula pulchra pulchra</i>	Widely distributed	-	-	-	-	-													+	+										+	+	+				
Brown Tree Frog	<i>Polyptodes megacephalus</i>	Widely distributed	-	-	-	-	-													++	++	+	+	+	+	+	++					++					
Butler's Pigmy Frog	<i>Microhyla butleri</i>	Widely distributed	-	-	-	-	-													+		++	+										+				
Chinese Bullfrog	<i>Hoplobatrachus rugulosus</i>	<b>Widely distributed in Lantau Island and New Territories.</b>		PRC	Class II	-	Endangered	Least Concern			+										+		+		+								+				
Greenhouse Frog	<i>Eleutherodactylus planirostris</i>	Introduced	-	-	-	-	-													+++	+													+++	+		
Gunther's Frog	<i>Hyloscirtus guentheri</i>	Widely distributed	-	-	-	-	-													++++	+	+	++	+	+	+							++++				
Marbled Pigmy Frog	<i>Microhyla pulchra</i>	Widely distributed	-	-	-	-	-													+													+				
Ornate Pigmy Frog	<i>Microhyla fissipes</i>	Widely distributed	-	-	-	-	-													+++	+	+											+++	+			
Paddy Frog	<i>Fejervarya limnocharis</i>	Widely distributed	-	-	-	-	-													++														++			
Spotted Narrow-mouthed Frog	<i>Kalophryns interlineatus</i>	<b>Widely distributed from low to moderate altitudes in northern and central New Territories</b>		-	-	-	Near Threatened	Least Concern																													
<b>Reptile</b>																																					
Bamboo Snake	<i>Cryptelytrops albolabris</i>	Distributed in shrubland, grassland throughout Hong Kong	-	-	-	-	-													+													+				
Bowring's Gecko	<i>Hemidactylus bowringii</i>	Distributed throughout Hong Kong	-	-	-	-	-	Least Concern	Least Concern										+	+													+	+			
Brook's Gecko	<i>Hemidactylus brookii</i>	An introduced species. Distributed in buildings in the western district on Hong Kong Island and Wong Tai Sin	-	-	-	-	-	Least Concern	Least Concern												+													+			
Changeable Lizard	<i>Calotes versicolor</i>	Widely distributed	-	-	-	-	-	Least Concern	-											++	+												++	+			
Chinese Cobra <sup>(2)</sup>	<i>Naja atra</i>	<b>Widely distributed</b>	PRC	-	Vulnerable	Vulnerable	Vulnerable														+													+			
Chinese Gecko	<i>Gekko chinensis</i>	Very common and widely distributed	-	-	-	-	-	Least Concern	Least Concern											++													+	+			
Garnot's Gecko	<i>Hemidactylus garnotii</i>	Distributed in Lantau Island, Hong Kong Island and Eastern New Territories	-	-	-	-	-	Least Concern	-											+														+			
Grass Lizard	<i>Takydromus sexlineatus ocellatus</i>	Distributed in grassland and woodland throughout Hong Kong	-	-	-	-	-	Least Concern	Least Concern											+														+			
Indo-Chinese Rat Snake	<i>Ptyas korros</i>	<b>Widely distributed</b>	PRC	-	Endangered	Vulnerable	Vulnerable	-																									+				
Large-spotted Cat Snake	<i>Boiga multomaculata</i>	Distributed in woodland and shrubland on Lantau Island, Sai Kung West Country Park, Tai Mo Shan Country Park, Tai Po Kau Nature Reserve and Ma On Shan Country Park.	-	-	-	-	-	Least Concern	-											+														+			
Long-tailed Skink	<i>Eutropis longicaudata</i>	Widely distributed	-	-	-	-	-	Least Concern	Least Concern		+								+			+	+	+	+							+	+	+			
Many-banded Krait	<i>Bungarus multicinctus multicinctus</i>	<b>Widely distributed in New Territories, Hong Kong Island and Lantau Island.</b>	PRC	-	Vulnerable	Endangered	Least Concern	Least Concern		+																											
Slender Forest Skink	<i>Scincella modesta</i>	Distributed in woodlands in a few scattered sites in the New Territories, on Lantau Island and Hong Kong Island	-	-	-	-	-	Least Concern	Least Concern										+														+	+			
								Total no. of species	4	3	5	3	3	0	4	3	0	0	3	1	16	11	4	5	1	6	3	3	0	4	3	1	1	5	2	16	11

## Notes:

(1) AFCD (2022). Hong Kong Biodiversity Database.

(2) Fellowes et al. (2002).

(3) The List of Endangered and Protected Species of China.

(4) Zhai and Wang (1998). China Red Data Book of Endangered Animals. Amphibia and Reptilia.

(5) Jiang et al. (2016). Red List of China's Vertebrates

(6) IUCN (2022). The IUCN Red List of Threatened Species. Version 2022.02.

Abbreviation for Habitats: MAR=Marsh / Reed; PO=Pond; NWC=Natural Watercourse; MWC=Modified Watercourse; SNWC=Semi-natural Watercourse; SWG=Seasonally Wet Grassland; WAL=Wet Agricultural Land; DAL=Dry Agricultural Land; WL=Woodland; MWL=Mixed Woodland; PL=Plantation; SL=Shrubland; GL=Grassland; V/O=Village / Orchard; DA=Developed Area / Wasteland

Code for Abundance: +++++=Dominant; ++++=Abundant; +++=Frequent; ++=Occasional; +=Scarce

Species of conservation importance is in **bold** type face

Appendix 10.4K: Freshwater Communities Species Recorded within the Northern Portion of the Assessment Area

Common Name	Scientific Name	Distribution in Hong Kong <sup>(1)</sup>	Level of Concern <sup>(2)</sup>	China Red Data Book <sup>(3)</sup>	Red List of China's Vertebrates <sup>(4)</sup>	IUCN Red List (Version 2022.2) <sup>(5)</sup>	Project Area				Assessment Area						Freshwater Sampling Location <sup>(6)</sup>					
							MIT	PO	MWC	SNWC	MIT	PO	NWC	MWC	SNWC	DAL	FS1	FS2	FS3	FS4	FS7	FS10
<b>Crabs and Shrimps</b>																						
-	<i>Somanniathelphusa zanklon</i>	Endemic	GC	-	-	Endangered			+					+								+
Atyid Shrimp	<i>Caridina</i> sp.	-	-	-	-	-								+								+
<b>Dragonflies and Damselflies (Order Odonata)</b>																						
Yellow Featherlegs (larvae)	<i>Copera marginipes</i>	Abundant; Widespread	-	-	-	Least Concern			+					+								+
<b>Freshwater Fishes</b>																						
-	<i>Channa</i> sp.	-	-	-	-	-			++	+			+	++	++						+	+
Goldgish	<i>Carassius auratus</i>	Not common in streams but occurs in many reservoirs and cultivated in fishponds	-	-	Least Concern	Least Concern	++				++											
Mosquito Fish	<i>Gambusia affinis</i>	Common. Introduced species.	-	-	-	Least Concern								++								++
Nile Tilapia	<i>Oreochromis niloticus</i>	Common. Also cultivated.	-	-	-	Least Concern			+++				+++	+++	+++			+++	+++	+++		+
Redbelly Tilapia	<i>Tilapia zillii</i>	Common	-	-	-	Vulnerable											+					
Rose Bitterling	<i>Rhodeus ocellatus</i>	Rare (Lee et al., 2004), Uncommon (AFCD, 2019). Recorded from a few localities in New Territories and a reservoir in Sha Tin	LC	-	Least Concern	Data Deficient	++				++											
Snakehead Murrel	<i>Channa striata</i>	Uncommon in the wild. Introduced species. Records from a few streams in North District and on Lantau Is.	-	-	Least Concern	Least Concern							+									
Spotted Snakehead	<i>Channa maculata</i>	Uncommon in the wild. Records from a few streams in North District, Tusen Mun and on Hong Kong and Lantau Is. Cultivated food fish	-	-	Least Concern	Least Concern		++					++									
<b>Other Freshwater Fauna</b>																						
-	<i>Ptilomera tigrina</i>	Very common	-	-	-	-			+				+								+	
Blood Worm	<i>Chironomidae</i> sp.	-	-	-	-	-			+++				+++									+++
Flatworm	<i>Dugesiidae</i> sp.	-	-	-	-	-			+				+									+
Leech	Unidentified sp. 1	-	-	-	-	-			+				+									+
Mayfly (larvae)	Unidentified sp. 1	-	-	-	-	-			+				++									++
Mosquito (larvae)	Unidentified sp. 1	-	-	-	-	-			+				+									++
Waterskater/Water strider	<i>Gerris</i> sp.	-	-	-	-	-							+									+
<b>Snails and Bivalves</b>																						
-	<i>Corbicula fluminea</i>	Very common	-	-	-	Least Concern			++				++									++
-	<i>Planorbidae</i> sp.	-	-	-	-	-			++				++									++
Apple Snail	<i>Pomacea canaliculata</i>	Invasive species	-	-	-	Least Concern			+				++	+	++	++	++	++	+	+	++	
Chinese Pond Mussel	<i>Sinanodonta woodiana</i>	-	-	-	-	Least Concern							++									++
Large Stream Snail	<i>Sulcospira hainanensis</i>	Abundant and widespread; Very common	-	-	-	Least Concern			++				++									++
Pond Snail	<i>Sinotaia quadrata</i>	Rare	-	-	-	Least Concern			++				++									++
Tadpole Snail	<i>Haitia acuta</i>	-	-	-	-	Least Concern			+				+									+
Total no. of species							1	1	17	1	1	1	8	17	3	2	1	2	3	7	6	11

Notes:

(1) AFCD (2022). Hong Kong Biodiversity Database.  
Dudgeon D. (2003). Hong Kong Field Guides: Hillstreams.  
Lee, L. F., Lam, K. S., Ng, K. Y., Chan, K. T. and Young, L. C. (2004). Field Guide to the Freshwater Fish of Hong Kong. Friends of the Country Parks.

(2) Fellowes et al. (2002).

(3) Yue P. and Chen Y. (1998). China Red Data Book of Endangered Animals: Pisces. Science Press, Beijing.

(4) Jiang, Z.G., et al. (2016). Red List of China's Vertebrates.

(5) IUCN (2022). The IUCN Red List of Threatened Species. Version 2022.02.

(6) Refer to Figure 10.1 for locations of freshwater sampling locations.

Abbreviation for Habitats: MIT=Mitigation Wetland; MAR=Marsh / Reed; PO=Pond; NWC=Natural Watercourse; MWC=Modified Watercourse; SNWC=Semi-natural Watercourse; DAL=Dry Agricultural Land

Code for Abundance: +++++=Dominant; ++++=Abundant; +++=Frequent; ++=Occasional; +=Scarce

Species of conservation importance is in **bold** type face

**Appendix 10.4L: Freshwater Communities Species Recorded within the Southern Portion of the Assessment Area**

Common Name	Scientific Name	Distribution in Hong Kong <sup>(1)</sup>	Level of Concern <sup>(2)</sup>	China Red Data Book <sup>(3)</sup>	Red List of China's Vertebrates <sup>(4)</sup>	IUCN Red List (Version 2022.2) <sup>(5)</sup>	Project Area			Assessment Area			Freshwater Sampling Location <sup>(6)</sup>			
							NWC	MWC	SNWC	NWC	MWC	SNWC	FS6	FS7	FS8	FS9
<b>Dragonflies and Damselflies (Order Odonata)</b>																
Indigo Dropwing (larvae)	<i>Trithemis festiva</i>	Abundant; Widespread	-	-	-	Least Concern	+			+					+	
<b>Freshwater Fishes</b>																
-	<i>Channa</i> sp.	-	-	-	-	-	+	+	+	+	+	+			+	
Chinese Barb	<i>Barbodes semifasciolatus</i>	Common. Widely distributed in most of local freshwater streams, rivers and reservoirs	-	-	Least Concern	Least Concern	++			++					+	
Dwarf Snakehead	<i>Channa gachua</i>	Introduced. Records from a few streams in North District	-	-	Least Concern	Least Concern	+			+					+	
<b>Other Freshwater Fauna</b>																
-	<i>Metrocoris</i> sp.	Very common	-	-	-	-	+			+					+	
-	<i>Ptilomera tigrina</i>	Very common	-	-	-	-	++			++					++	
-	<i>Rhagovelia</i> sp.	Common	-	-	-	-	++++			++++					++++	
Blood Worm	<i>Chironomidae</i> sp.	-	-	-	-	-	++			++	+	++			+	
Flatworm	<i>Dugesidae</i> sp.	-	-	-	-	-						+			+	
Mayfly (larvae)	<i>Unidentified</i> sp. 1	-	-	-	-	-	+			+		+			+	+
Waterskater/Water strider	<i>Gerris</i> sp.	-	-	-	-	-	++			++					++	
<b>Snails and Bivalves</b>																
-	<i>Planorbidae</i> sp.	-	-	-	-	-	++++			++++					++++	+
Apple Snail	<i>Pomacea canaliculata</i>	Invasive species	-	-	-	Least Concern	++	+		++	+		+	++		++
Large Stream Snail	<i>Sulcospira hainanensis</i>	Abundant and widespread; Very common	-	-	-	Least Concern	++	++		++	++	+	++	++	+	+
Total no. of species							12	4	1	12	4	5	3	3	12	5

**Notes:**

(1) AFCD (2022). Hong Kong Biodiversity Database.

Dudgeon D. (2003). Hong Kong Field Guides: Hillstreams.

Lee, L. F., Lam, K. S., Ng, K. Y., Chan, K. T. and Young, L. C. (2004). Field Guide to the Freshwater Fish of Hong Kong. Friends of the Country Parks.

(2) Fellowes et al. (2002).

(3) Yue P. and Chen Y. (1998). China Red Data Book of Endangered Animals: Pisces. Science Press, Beijing.

(4) Jiang, Z.G., et al. (2016). Red List of China's Vertebrates.

(5) IUCN (2022). The IUCN Red List of Threatened Species. Version 2022.02.

(6) Refer to Figure 10.1 for locations of freshwater sampling locations.

Abbreviation for Habitats: NWC=Natural Watercourse; MWC=Modified Watercourse; SNWC=Semi-natural Watercourse; DAL=Dry Agricultural Land

Code for Abundance: +++++=Dominant; ++++=Abundant; +++=Frequent; ++=Occasional; +=Scarce

Species of conservation importance is in **bold** type face