

## Supporting Information

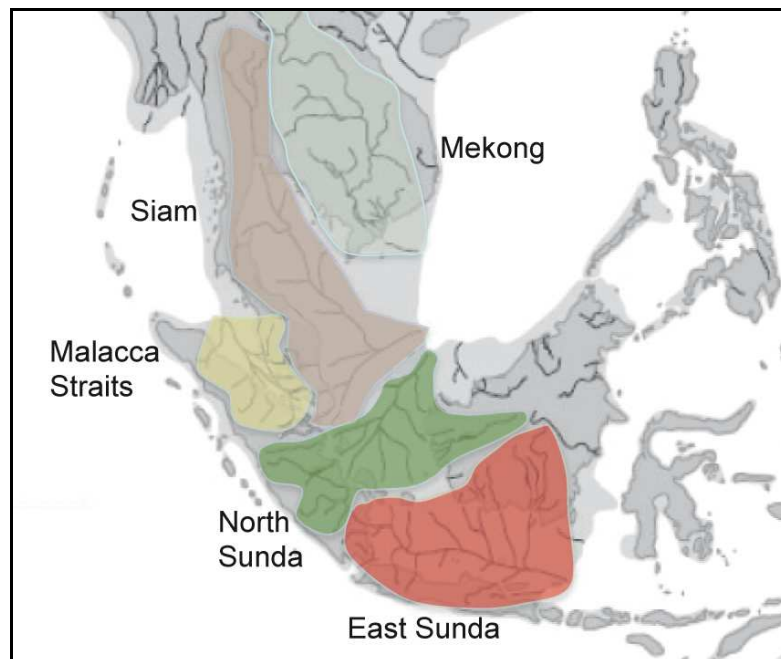
### Phylogeography of the Asian softshell turtle *Amyda cartilaginea* (BODDAERT, 1770): evidence for a species complex

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#### ERRATUM

Page 238, right column, sentence starting with line 4 must read:  
“However, we wish to point out that some specimens of *A. o. phayrei*, ...”



**Fig. S1.** Quaternary palaeodrainage systems and shorelines in Southeast Asia according to VORIS (2000). Modified from DE BRUYN et al. (2013). Shown is the lowest sea level stand (-120 m).

**Table S1.** Used samples, GenBank sequences and their accession numbers. For fresh samples, the sequences labelled as *cyt b* and ND4 comprised also adjacent DNA coding for tRNAs. Abbreviations: MTD D – Museum of Zoology, Senckenberg Dresden, Herpetological Collection; MTD T – Museum of Zoology, Senckenberg Dresden, Tissue Collection; NMW – Natural History Museum Vienna. Samples processed in the clean room bear asterisks. Collection year of museum specimens in brackets following locality data. For identification of *Amyda* clades with distinct taxa, see Figure 2.

Taxon	Voucher	Clade	Geographical Provenance	12S	<i>cyt b</i>	ND4	Cmos	ODC	R35
<i>Amyda cartilaginea</i> s.l.	MTD T 6122	4	Bangladesh: hills of Chittagong	LM537429	LM537462	LM537495	LM537528	LM537547	LM537565
<i>Amyda cartilaginea</i> s.l.	MTD T 6123	4	Bangladesh: hills of Chittagong	LM537430	LM537463	LM537496	LM537529	LM537548	LM537566
<i>Amyda cartilaginea</i> s.l.	MTD T 6124	4	Bangladesh: hills of Chittagong	LM537431	LM537464	LM537497	LM537530	LM537549	LM537567
<i>Amyda cartilaginea</i> s.l.	MTD D 42530	6	Cambodia	LM537432	LM537465	LM537498	LM537531	LM537550	LM537568
<i>Amyda cartilaginea</i> s.l.	MTD T 10672	6	Cambodia	LM537433	LM537466	LM537499	LM537532	LM537551	LM537569
<i>Amyda cartilaginea</i> s.l.	MTD D 42529	6	Cambodia: Ratanakiri: Lumphat	LM537434	LM537467	LM537500	LM537533	—	LM537570
<i>Amyda cartilaginea</i> s.l.	NMW 32943*	5	China: Yunnan: Ruili (1993)	LM537435	LM537468	LM537501	—	—	—
<i>Amyda cartilaginea</i> s.l.	NMW 30203:4*	2	Indonesia: East Java: Jombang (1898)	LM537436	LM537469	LM537502	—	—	—
<i>Amyda cartilaginea</i> s.l.	NMW 30206:2*	2	Indonesia: West Java: Garut, Tji Maunk (1928)	LM537437	LM537470	LM537503	—	—	—
<i>Amyda cartilaginea</i> s.l.	NMW 30209:2*	2	Indonesia: West Java: Sukabumi (c. 1900)	LM537438	LM537471	LM537504	—	—	—
<i>Amyda cartilaginea</i> s.l.	NMW 30208:1*	2	Indonesia: West Java: Tasikmalaya (1926)	LM537439	LM537472	LM537505	—	—	—
<i>Amyda cartilaginea</i> s.l.	NMW 30205:2*	2	Indonesia: Kalimantan (Borneo): Liang Buaya (1885)	LM537440	LM537473	LM537506	—	—	—
<i>Amyda cartilaginea</i> s.l.	NMW 14909*	2	Indonesia: Kalimantan (Borneo): Muara Teweh (1883)	LM537441	LM537474	LM537507	—	—	—
<i>Amyda cartilaginea</i> s.l.	NMW 30204:4*	3	Indonesia: Kalimantan (Borneo): Nanga Badau (“Nanga Bandang”; 1874)	LM537442	LM537475	LM537508	—	—	—
<i>Amyda cartilaginea</i> s.l.	MTD T 10673	2	Indonesia: Sulawesi	LM537443	LM537476	LM537509	LM537534	LM537552	LM537571
<i>Amyda cartilaginea</i> s.l.	NMW 18249*	3	Indonesia: Sumatra (1942)	LM537444	LM537477	LM537510	—	—	—
<i>Amyda cartilaginea</i> s.l.	MTD T 5312	6	Laos: Vang Vieng	LM537445	LM537478	LM537511	LM537535	LM537553	LM537572
<i>Amyda cartilaginea</i> s.l.	NMW 30205:3*	1	Malaysia: Sarawak (Borneo): Baram river (1901)	LM537446	LM537479	LM537512	—	—	—
<i>Amyda cartilaginea</i> s.l.	MTD T 11234	3	Malaysia: Sarawak (Borneo): Batang Ai dam	LM537447	LM537480	LM537513	LM537536	LM537554	LM537573
<i>Amyda cartilaginea</i> s.l.	MTD T 11233	3	Malaysia: Sarawak (Borneo): Engkari river near Ukum Longhouse	LM537448	LM537481	LM537514	LM537537	LM537555	LM537574
<i>Amyda cartilaginea</i> s.l.	MTD D 40366	5	Myanmar: Lake Inlé	LM537449	LM537482	LM537515	LM537538	LM537556	LM537575
<i>Amyda cartilaginea</i> s.l.	MTD T 9858	5	Thailand	LM537450	LM537483	LM537516	LM537539	LM537557	LM537576
<i>Amyda cartilaginea</i> s.l.	MTD T 9859	5	Thailand	LM537451	LM537484	LM537517	LM537540	LM537558	LM537577
<i>Amyda cartilaginea</i> s.l.	MTD T 9860	5	Thailand	LM537452	LM537485	LM537518	LM537541	LM537559	LM537578
<i>Amyda cartilaginea</i> s.l.	NMW 30204:1*	5	Thailand (1903)	LM537453	LM537486	LM537519	—	—	—

Table S1 continued									
Taxon	Voucher	Clade	Geographical Provenance	12S	cyt b	ND4	Cmos	ODC	R35
<i>Amyda cartilaginea</i> s.l.	NMW 30204:2*	5	Thailand (1903)	LM537454	LM537487	LM537520	—	—	—
<i>Amyda cartilaginea</i> s.l.	NMW 30205:1*	5	Thailand: Bangkok (1870)	LM537455	LM537488	LM537521	—	—	—
<i>Amyda cartilaginea</i> s.l.	NMW 30206:1*	5	Thailand: vicinity of Bangkok (1972)	LM537456	LM537489	LM537522	—	—	—
<i>Amyda cartilaginea</i> s.l.	MTD T 11232	5	Unknown	LM537457	LM537490	LM537523	LM537542	LM537560	LM537579
<i>Amyda cartilaginea</i> s.l.	MTD T 7074	2	Unknown	LM537458	LM537491	LM537524	LM537543	LM537561	LM537580
<i>Amyda cartilaginea</i> s.l.	MTD T 7075	2	Unknown	LM537459	LM537492	LM537525	LM537544	LM537562	LM537581
<i>Amyda cartilaginea</i> s.l.	MTD T 7076	2	Unknown	LM537460	LM537493	LM537526	LM537545	LM537563	LM537582
<i>Amyda cartilaginea</i> s.l.	MTD T 7077	2	Unknown	LM537461	LM537494	LM537527	LM537546	LM537564	LM537583
<i>Dogania subplana</i>	—	—	Unknown	AF366350	AF366350	AF366350	—	HE801842	—
<i>Nilssonina formosa</i>	MTD T 6068	—	China: Yunnan: Shuangbai	HE801637	HE801688	HE801740	HE801763	HE801806, HE801844	HE801869
<i>Nilssonina gangetica</i>	MTD T 6062	—	Bangladesh: Patuakhali district	HE801642	HE801693	HE801742	HE801768	HE801810, HE801846	HE801874
<i>Nilssonina hurum</i>	MTD T 3421	—	Bangladesh: Khulna	HE801657	HE801709	AM495218	HE801778	HE801819, HE801855	HE801884
<i>Nilssonina leithii</i>	MTD T 3099	—	India: Maharashtra: Purna river	HE801668	HE801721	AM495225	HE801788	HE801828, HE801864	HE801894
<i>Nilssonina nigricans</i>	MTD T 3415	—	Bangladesh: Chittagong: Nasirabad: shrine pond	HE801670	HE801723	AM495227	HE801790	HE801830	HE801896
<i>Palea steindachneri</i>	—	—	Unknown	FJ541030	FJ541030	FJ541030	HE801804	HE801843, HE801868	HE801910
<i>Pelodiscus maackii</i>	MTD T 4235, MTD T 4236	—	Russia: Primorsky Territory: Lake Khanka	FM999003	FM999019	FM999011	HE801805	—	HE801911

**Table S2.** Primer sequences and lengths of PCR products for historical samples. Nucleotides in brackets represent variable positions.

DNA fragment	Primer	Primer sequence (5'-3')	Length of obtained DNA fragment [bp] <sup>1</sup>
12S rRNA short	AmCa_12s_For1	TAC AAT AGA AAT AAC TAC GG	33
	AmCa_12s_Rev1	TTC TTA ATT TAC TAC TAA ATC C	
12S rRNA long	AmCa_12s_For1b	CAA CTA AGA TGG AAG AAA TGG G	63
	AmCa_12s_Rev1	TTC TTA ATT TAC TAC TAA ATC C	
cyt <i>b</i>	AmCa_cytb_For1	GTT TCT CCG TAG ATA ATG CC	108
	AmCa_cytb_Rev1	TCG GTG TTT GAG TTT AAT CC	
ND4	AmCa_ND4_For1	GTC ACA CCA TCA CAC ACA CG	70
	AmCa_ND4_Rev1	TAT AAG CAG TAT A(AC)T GGG CC	

<sup>1</sup> Length after primers were trimmed.

**Table S3.** PCR conditions for historical and fresh samples.

DNA fragment		ID	C	Thermocycling conditions			
				D	A	E	FE
12S rRNA short	Historical samples	94°C, 5 min	40	94°C, 30 s	54°C, 30 s	72°C, 30 s	72°C, 10 min
12S rRNA long	Historical samples	94°C, 5 min	40	94°C, 30 s	52°C, 30 s	72°C, 30 s	72°C, 10 min
cyt <i>b</i>	Historical samples	94°C, 5 min	40	94°C, 30 s	46–54°C, 30 s	72°C, 30 s	72°C, 10 min
ND4	Historical samples	94°C, 5 min	40	94°C, 30 s	45–49°C, 30 s	72°C, 30 s	72°C, 10 min
12S rRNA	Fresh samples	94°C, 5 min	30–35	94°C, 30 s	50°C, 30 s	72°C, 60 s	72°C, 10 min
cyt <i>b</i> parts 1 & 2	Fresh samples	94°C, 5 min	30–35	94°C, 30 s	50°C, 30 s	72°C, 60 s	72°C, 10 min
ND4	Fresh samples	94°C, 5 min	35	94°C, 30 s	53°C, 30 s	72°C, 60 s	72°C, 10 min
Cmos	Fresh samples	94°C, 5 min	35	94°C, 30 s	58°C, 30 s	72°C, 60 s	72°C, 10 min
ODC	Fresh samples	94°C, 5 min	30–40	94°C, 30 s	60°C, 30 s	72°C, 60 s	72°C, 10 min
ODC alternative	Fresh samples	94°C, 5 min	40	94°C, 30 s	55°C, 30 s	72°C, 60 s	72°C, 10 min
R35	Fresh samples	94°C, 5 min	35	94°C, 30 s	53°C, 30 s	72°C, 60 s	72°C, 10 min

Abbreviations: ID = initial denaturing, C = number of cycles, D = denaturing, A = annealing, E = extension, FE = final extension.