Supplementary Material

Evidence of multiple stocks of catfish, *Rita rita* (Hamilton), from the Ganges Basin on the basis of an integrated analysis of truss morphometrics, otolith microchemistry, and otolith shape

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Table S1. Sampling details of the fish used in the analyses.

Method and site	Sample size	Collection date range	Mean size (s.d.)	Size range (cm)
Truss Morphology				
River Ganga	80	Sep-2018 to Aug-2019	23.2 (7.3)	13–40
River Yamuna	80	Sep-2018 to Aug-2019	27.4 (4.7)	20– 44
River Ramganga	80	Sep-2018 to Aug-2019	27.8 (6.05)	16–45.4
Otolith Chemistry				
River Ganga	15	Sep-2018 to Aug-2019	30.4 (6.96)	24–40
River Yamuna	15	Sep-2018 to Aug-2019	28.1 (3.7)	22–34.2
River Ramganga	15	Sep-2018 to Aug-2019	26.8 (5.7)	18.2–36.4
Otolith Shape				
River Ganga	20	Sep-2018 to Aug-2019	25.6 (9.8)	9.5–44
River Yamuna	20	Sep-2018 to Aug-2019	24.5 (4.5)	17–33
River Ramganga	20	Sep-2018 to Aug-2019	21.0 (5.2)	13.2–32

Table S2. Component loadings of the first three principal components for truss morphometric characters in *Rita rita* collected from Ganga, Yamuna and Ramganga rivers.

Characters	Principal component		
	PC I	PC II	PC III
1–2	0.756	0.003	–0.205
2–3	0.74	0.228	–0.183
3–4	0.481	0.431	0.446
4–5	0.213	0.002	0.304
5–6	0.111	0.579	–0.283
6–7	0.422	0.321	0.375
7–8	0.623	0.348	0.053
8–9	0.575	0.376	0.062
9–10	0.255	0.704	0.212
10–11	0.706	0.333	–0.093
11–12	0.821	–0.279	0.154
12–13	0.73	0.319	–0.288
13–1	–0.18	0.617	–0.143
1–12	0.483	0.145	–0.328
13–2	0.802	0.214	–0.324
2–12	0.716	0.375	–0.218
3–12	0.895	–0.062	–0.123
2–11	0.881	–0.352	0.026
3–11	0.859	–0.206	0.239
11–4	0.844	–0.028	0.195
3–10	0.922	–0.259	0.06
4–10	0.808	0.12	–0.018
4–9	0.889	–0.1	–0.006
5–10	0.583	0.345	–0.06
5–9	0.479	0.587	–0.004
6–9	0.032	0.366	–0.206
9–7	0.835	0.035	0.16
6–8	0.641	0.394	–0.003
TL	0.615	–0.722	–0.116
SL	0.562	–0.77	–0.047
FL	0.562	–0.77	–0.045
PFL	0.721	0.017	0.12
DFL1	0.781	–0.299	–0.144
DFL2	0.366	0.035	0.497
PVFL	0.128	0.357	0.662
AFL	0.441	0.199	0.378
HL	0.607	0.322	–0.389
ED	–0.429	0.748	–0.182
PPL	0.6	0.023	0.039
PDL	0.204	–0.084	–0.053
CPL	–0.004	–0.021	0.004
PPVL	0.712	–0.417	–0.122
Percentage of variance explained	39.15	14.61	5.49

Table S3. Contribution of morphometric measurements to discriminant functions of *Rita rita* collected from Ganga, Yamuna and Ramganga rivers.

Characters	DF I	DF II
1–2	0.149	−0.678[A]
2–3	0.401	−0.347
3–4	−0.11	−0.156
4–5	0.042	0.226
5–6	−0.314	0.118
6–7	−0.434	−0.257
7–8	−0.205	0.052
8–9	0.311	0.22
9–10	0.484	0.232
10–11	0.081	0.341
11–12	−0.959A	0.244
12–13	−0.305	0.145
13–1	−0.192	0.233
1–12	0.018	−0.119
13–2	0.051	0.297
2–12	0.843A	0.237
3–12	−0.09	0.186
2–11	0.1	0.007
3–11	0.117	−0.186
11–4	−0.344	−0.071
3–10	−0.222	−0.564A
4–10	−0.009	0.099
4–9	0.177	−0.5
5–10	0.097	−0.127
5–9	0.15	−0.629A
6–9	−0.276	−0.206
9–7	−0.271	0.956A
6–8	−0.195	−0.148
TL	−1.233A	.635A
SL	1.181A	3.898A
FL	0.264	−3.878A
PFL	−0.091	−0.109
DFL1	−0.275	−0.863A
DFL2	0.025	−0.23
PVFL	−0.066	0.04
AFL	0.083	0.527A
HL	0.254	0.068
ED	0.680A	−0.115
PPL	0.058	0.225
PDL	0.01	0.225
CPL	−0.182	−0.189
PPVL	0.601A	0.699A

[A]Largest correlation between each variable and any DF.

Table S4. Contribution of otolith chemistry to discriminant functions of *Rita rita.*

Elements	DF1	DF2
Mg	0.954[A]	0.119
Fe	0.245[A]	0.184
Mn	0.167[A]	0.029
Ba	–0.248	0.592[A]
Sr	0.276	–0.496[A]
Pb	0.345	0.399[A]

[A] Largest correlation between each variable and any DF