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**Results of the Austrian-Indian Hydrobiological Mission 1976 to the
Andaman-Islands:
Part VII: List of Fishes collected in running Waters of the Andaman-
Islands**

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Abstract

In the running waters of South- and North-Andaman seven species of fishes were recorded: *Clarias batrachus* (LINNÉ, 1758); *Heteropneustes fossilis* (BLOCH, 1797); *Aplocheilichthys panchax* (HAMILTON & BUCHANAN, 1822); *Doryichthys insularis* (HORA, 1925); *Ophiocephalus* (= *Channa*) *gachua* (HAMILTON & BUCHANAN, 1822); *Eleotris andamanensis* (HERRE, 1939); *Periophthalmus barbarus* (LINNÉ, 1758).

The Austrian-Indian Hydrobiological Mission 1976 to the Andaman-Islands has collected in different running water systems of South- and North-Andaman between headwaters and the mouth-zones. The recorded specimens of fishes were determined by J. P. GOSSE (Chief of the Section of Fishes; Royal Institut of Natural Science of Belgium, Brussels). We thank gratefully Mr. GOSSE for his work. Following species were found:

Super-Class: PISCES
Class: Osteichtys
Sub-Class: Acanthopterygii
Super-Ordo: Teleostei
Ordo: Siluriformes
Familia: Clariidae
Genus: *Clarias*

1. *Clarias batrachus* (LINNÉ, 1758)

Locality: S.-And./10e¹/8. 12. 1976: Rivulet near the village of Bimblton, E of Port Blair; flowing through paddy-fields; bordered by some trees and scrub; sunny; in deeper pools watering-place for buffalos.

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Alt:	30 m	Te:	25.7° (10 ^h) – 28.5° C (17 ^h)			
Br:	2–10 m	Che:	F	L	F	L
D:	c: 3–5 cm; b, p: 50 cm – 1 m	Cond:	222	242	Na:	– 10.8
C:	30–50 cm/sec; b, p: 0–10 cm/sec	pH:	7.8	7.3	K:	– 0.7
Gr:	muddy gravel (3–5 cm Ø)	T.H.:	5.9°	–	Ca:	14 23
	b, p: mud, vegetable debris	C.H.:	5.9°	–	Mg:	– 14
		Alc:	2.2	–	T.Fe:	– 0.22
Alg:	<i>Cladophora</i> sp.; b, p: paddings of <i>Rhizoclonium</i> sp., <i>Oedogonium</i> sp., <i>Hydrosera</i> <i>whampensis</i> ; cf. Characea	SiO ₂ :	–	26	Cl:	12 10
		Col:	turbid (visibility: 20cm)			
		Col:	turbid (visibility: 20 cm)			
		Found:	1 specimen			

Distribution: India, Ceylon, Malay Peninsula and Archipelago, Philippines.

Familia: Heteropneustidae

Genus: Heteropneustes

2. *Heteropneustes fossilis* (BLOCH, 1797)

Localities: S.-And./10e¹/8. 12. 1979: Description see above by *Clarias batrachus*. 5 specimens.

S.-And./13 b/18. 12. 1976: Recurrent flow of a very slow flowing creek with large, deep pools near Mithakhrai; situated in a dense forest and very shady.

Alt:	20 m	Che:	F	L	F	L
Br:	2–5 m	Cond:	152	160	Na:	– 11
D:	30 cm – >1 m	pH:	7	6.9	K:	– 2.4
C:	0–10 cm/sec	T.H.:	2.8°	–	Ca:	8 16
Gr:	muddy sand; some stones, vegetable debris	C.H.:	2.8°	–	Mg:	– 7
		Alc:	1.4	–	T.Fe:	– 0.15
		SiO ₂ :	–	11	Cl:	18 10
Te:	25.4° C (15 ^h)	Found:	7 specimens			
Col:	turbid (visibility: 10 cm)					

Distribution: Nepal, Hindustan, India, ES-Asia.

Ordo: Atheriniformes

Sub-Ordo: Cyprinodontoidei

Familia: Cyprinodontidae

Genus: *Aplocheilus*

3. *Aplocheilus panchax* (HAMILTON & BUCHANAN, 1822)

Localities: S.-And./9A/7. 12. 1976: Rivulet near Tayaledrabad; flowing through paddyfields and swamps; sunny; in the pools watering-place for buffalos.

Alt:	20 m	Gr:	gravel (3–5 cm Ø); mud, sand; vegetable debris			
Br:	2–3 m	Te:	26.6° (16 ^h) – 25.5° C (17 ^h)			
D:	2–5 cm; p: 50 cm	Che:	F			
C:	30–50 cm/sec b, p: 0–20 cm/sec	pH:	7			
		T.H.:	11°			

Found: some specimens

S.-And./10/8. 12. 1976: Description see above by *Clarias batrachus*.

S.-And./16/19. 12. 1976: Rivulet near Matra; flowing through paddy-fields; sunny.

Alt:	20 m	Che:	After a heavy rain the station was overflowed
Br:	2-3 m		and no sample was taken!
D:	5-10 cm; b, p: 50 cm - >1 m;	Found:	some specimens
C:	30-50 cm/sec;		
	b, p: muddy sand		
Te:	25.1° C (13 ^h)		

S.-And./19/21. 12. 1976: Rivulet near Allahmajid; affluent of the Dhanikari-reservoir; bordered by dense primary forest, very shady.

Alt:	200 m	Te:	24.6° (10 ^h) - 25.1° C (12 ^h)
Br:	3-10 m	Che:	F L F L
D:	10-20 cm;	Cond:	136 148 Na: - 10.7
	p: 50 cm	pH:	7 6.8 Ca: 10 13
C:	20-30 cm/sec;	T.H.:	2.6° - K: - 1
	b, p: 0-10 cm/sec	C.H.:	2.6° - Mg: - 10
Gr:	serpentine rocks,	Alc:	1 - T.Fe: - 0.06
	boulders (10-50 cm Ø);	SiO ₂ :	- 18 Cl: 18 11
	gravel, sand and b, p:		
	mud, vegetable debris		
Alg:	<i>Nostoc</i> sp., <i>Compsogon</i>	Col:	clear
	<i>caeruleus</i> ; b, p: <i>Nostochopsis</i>	Found:	some specimens
	<i>lobatus</i> , cf. <i>Bostrychia radicans</i> ,		
	<i>Hydrosera whampoensis</i>		

N.-And./4/14. 12. 1976: Rivulet Lakshmipur; approx. 5 km SW of Diglipur; meandering through secondary forest; bordered partly by meadows and scrub; sunny.

Alt:	10-20 m	Che:	F L F L
B:	2-5 m	Cond:	168 185 Na: - 10.7
D:	3-5 cm/sec;	pH:	7.4 7.8 K: - 1.5
	p: 50 cm	T.H.:	4.4° - Ca: 6 15
C:	30-50 cm/sec;	C.H.:	3.8° - Mg: - 10
	b, p: 0-10 cm/sec	Alc:	1.5 - T.Fe: - 0.05
Gr:	gravel (3-5 cm Ø);	SiO ₂ :	- 13 Cl: 14 7
	b, p: muddy sand		
Alg:	dense growth of filamentous	Col.:	clear
	<i>Spirogyra</i> sp.; <i>Compsogon</i>	Found:	somes specimens
Te:	<i>caeruleus</i>		
	25.6° (10 ^h) - 27.1° C (12 ^h)		

Distribution: India, Malay Peninsula and Archipelago, Thailand.

Ordo: Gasterosteiformes
 Sub-Ordo: Syngnathoidei
 Familia: Syngnathidae
 Genus: *Doryichtys*

4. *Doryichtys insularis* (HORA, 1925)

Localities: S.-And./4 a, b/5. 12. 1976: Rivulet in the area of Chidiatop; approx. 300 m upstream of the mouth-zone and about 100 m upstream of the influence of brackish water of the recurrent flow during high-tide; flowing through plantations, paddy-fields and bordered by scrub and some trees; partly shady, partly sunny; floating roots and plants on the border.

Alt:	1-2 m	Te:	25.1° (9. ³⁰) - 27.6° C (11 ^h)			
Br:	2-3 m	Che:	F	L	F	L
D:	5 cm; p: 15-30 cm	Cond:	275	324	Na:	- 10.3
C:	30-50 cm/sec; b, p: 0-10 cm/sec	pH:	7.4	7.5	K:	- 0.4
Gr:	boulders (10-20 cm Ø); gravel	T.H.:	10°	-	Ca:	19 21
Alg:	c: floating <i>Spirogyra</i> cf. <i>decimina</i> ; p: 150 m downstream in the brackish zone: <i>Thorea ramosissima</i>	C.H.:	10°	-	Mg:	- 30
		Alc:	3.3	-	T.Fe:	- <0.01
		SiO ₂ :	-	12	Cl:	14 12
		Col:	clear			
		Found:	8 specimens near the border between floating roots and plants from the border.			

N.-And./2 1/13. 12. 1976: River Kalimpong on the W-slope of the Saddle Peak, approx. 4 km S of Diglipur; broad valley; righthand the steep slopes of the Saddle Peak with dense primary forest, lefthand cleared area with scrub and behind paddy-fields; sunny.

Alt:	50 m	Te:	24.9° (10 ^h) - 26.2° C (12 ³⁰)			
B:	30-40 m; during dry season divided in 2-3 branches of 5-10 m	Che:	F	L	F	L
D:	5-20 cm; b, p: 50 cm - >1 m	Cond:	272	306	Na:	- 3.7
C:	50 cm/sec; b, p: 0-10 cm/sec	pH:	8	7.4	K:	- 0.3
Gr:	boulders (5-20 cm Ø), gravel; b, p: sand amud, vegetable debris	T.H.:	10°	-	Ca:	6 8
Alg:	paddings of <i>Spirogyra</i> sp.	C.H.:	8.4°	-	Mg:	- 41 (!)
		Alc:	2.8	-	T.Fe:	- <0.01
		SiO ₂ :	-	26	Cl:	12 5
		Col.:	clear			
		Found:	1 specimen			

Distribution: Endemic for the Andamans; other species of the genus *Doryichtys* are widely distributed in coastal rivers of the Indopacific.

Ordo: Ophiocephaliformes (= Channiformes)
 Familia: Ophiocephalidae (= Channidae)
 Genus: *Ophiocephalus* (= *Channa*)

5. *Ophiocephalus* (= *Channa*) *gachua* (HAMILTON & BUCHANAN, 1822)

Locality: S.-And./19 d/21. 12. 1976: Description see above by *Aplocheilus panchax*: Found: 1 specimen.

Distribution: Beluchistan, Afghanistan, India, Ceylon, Malay Peninsula and Archipelago.

Ordo: Perciformes
 Sub-Ordo: Gobioidei
 Familia: Gobiidae
 Subfamilia: Eleotrinae
 Genus: *Eleotris*

6. *Eleotris andamanensis* (HERRE, 1939)

Locality: S.-And./4 b/5. 12. 1976: Description see above, by *Doryichtys insularis*. Found: 2 specimens.

Distribution: Endemic for the Andamans; other species of the genus *Eleotris* are widely distributed in coastal rivers of the Indopacific.

Subfamilia: Gobiinae
 Genus: *Periophthalmus*

7. *Periophthalmus barbarus* (LINNÉ, 1758).

Locality: S.-And./17B/20. 12. 1976: Small torrent from the hills near the Tourist-Home of Port Blair, mouth-region in opposite of the Fisheries – Jetty of the Harbour; the brook flows in the part of the mouth during the low tide approx. 100 m to the sea; during high tide this area is covered by sea water, flowing in a recurrent flow to the hill araea, also during low tide slightly brackish.

Alt:	1 m to mean sea level	Che:	F	L	F	L
B:	1–2 m (low tide)	Cond:	7521	9500	Na:	– 1750
D:	5–10 cm (low tide)	pH:	7.2	6.9	K:	– 75
Gr:	gravel, sand, dead coralls, empty shells	T.H.:	>50°	–	Ca:	82 87
Te:	28.1° C (15 ^b)	C.H.:	7°	–	Mg:	– 245
		Alc:	1.8	–	T.Fe:	– 0.21
		SiO ₂ :	–	12	Cl:	3000 3360
		Found:	2 specimens			

Distribution: Shallows and brackish areas of the Indopacific.

Abbreviations

Alt: Altitude (in m above mean sea-level); **Br:** Breadth of the running water (in m); **D:** Depth of the running water (in cm or m); **b:** near the banks on the borders; **p:** in pools between cascades; **c:** cascades; **C:** velocity of the Current (in cm/sec or m/sec); **Col:** Colour of the water; **Gr:** Ground (mud, sand, gravel, boulders, rock); **Ø:** Diameter of stones or boulders; **Alg:** growth on Algae; **Te:** Temperature of the water (in ° Celsius); **Che:** Chemistry of the water-samples from the station; **F:** values found at the stations with Field-methods; **L:** values determinated in the Laboratory with exact laboratory-methods; **Cond:** electrolytic Conductivity (in µ Siemens by 20° C); **pH;** **T.H.:** Total Hardness (in German Hardness Degrees ° dH); **C.H.:** Carbonat Hardness (in ° KH degree); **Alc:** Alcalinity (in mval/l); **Na:** content on Na-ions (in mg/l); **Mg:** content on Magnesium-ions (in mg/l); **K:** content on Kalium-ions (in mg/l); **Ca:** content on Calcium-ions (in mg/l); **Cl:** content on Chlorid-ions (in mg/l); **T.Fe:** content on Total iron (in mg/l); **SiO₂:** content on Silicate (in mg/l); **–:** no measurement were executed.

References

- STARMÜHLNER, F. (1978): Results of the Austrian-Indian Hydrobiological Mission 1976 to the Andaman-Islands: Part I: Preliminary Report: Introduction, Methods, General Situation of the Islands, Description of the Stations and General Comments on the Distribution of the Fauna in Running Waters of the Islands. Aquatic Biology, 2: 139.**