

Table 8 Biological trait matrix along with contribution (%) of species at each zone

Species	Zones			Buccal morphology				Tail shape				Adult Length (mm)				Adult shape			Life history (c-p score)		
	Shelf (%)	Slope (%)	Basin (%)	1A	1B	2A	2B	R	E/F	CO	CA	>1	1-2	2-4	>4	ST	SL	L/T	2	3	4
<i>Acantholaimus calathus</i>	0.11	0.00	0.00	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0
<i>Acantholaimus elegans</i>	0.19	0.23	1.11	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Acantholaimus filicaudatus</i>	0.15	0.15	0.19	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Acantholaimus mirabilis</i>	0.31	0.00	0.00	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0
<i>Actarjania sp 1</i>	0.15	0.00	0.00	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0
<i>Actinonema sp 1</i>	0.31	0.00	0.00	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Actinonema sp 2</i>	0.15	0.00	0.00	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Actinonema sp 3</i>	0.31	0.00	0.00	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Agioloalaimus sp 1</i>	0.38	0.00	0.00	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1
<i>Anoplostoma blanchardi</i>	0.69	0.69	0.50	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Anoplostoma sp 1</i>	0.50	0.19	0.72	0	1	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0
<i>Anoplostoma sp 2</i>	0.38	0.38	0.00	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Araeolaimus sp 1</i>	0.19	0.04	0.00	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Araeolaimus sp 2</i>	0.23	0.00	0.27	1	0	0	0	0	0	1	1	0	1	0	0	0	1	0	0	1	0
<i>Axonolaimus sp 1</i>	1.03	0.00	0.00	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	0
<i>Axonolaimus sp 2</i>	0.15	0.04	0.00	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0

<i>Axonolaimus sp 3</i>	1.45	0.00	0.00	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0
<i>Bathyeurystomina sp 1</i>	0.11	0.00	0.38	0	0	0	1	0	0	1	0	0	0	0	1	0	1	0	0	0	1
<i>Campylaimus sp 1</i>	0.19	0.00	0.00	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0
<i>Ceramonema yunfengi</i>	0.46	0.00	0.00	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Cermonema attenuatum</i>	0.23	0.04	0.00	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Cheironchus sp 1</i>	0.23	0.00	0.00	0	0	0	1	1	0	0	0	0	0	1	0	0	1	0	0	1	0
<i>Choanolaimus sp 2</i>	0.04	0.38	0.00	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0
<i>Chromadora sp 1</i>	0.23	0.34	0.00	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0	0	1	0
<i>Chromadorita sp 1</i>	0.19	0.65	0.00	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0
<i>Chromadorita sp 2</i>	2.78	0.19	0.00	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Cobbia dentata</i>	0.72	0.38	0.00	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0
<i>Cobbia sp 1</i>	0.34	0.00	0.00	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0
<i>Cobbia sp 3</i>	0.72	0.04	0.04	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0
<i>Cobbia sp 2</i>	0.23	0.11	0.00	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0
<i>Dagda sp 1</i>	0.31	0.00	0.27	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0
<i>Daptonema circulum</i>	0.84	0.31	0.53	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0
<i>Daptonema sp 1</i>	0.72	1.14	0.00	0	1	0	0	0	0	0	1	1	0	0	0	1	0	0	1	0	0
<i>Daptonema sp 2</i>	1.56	0.00	0.00	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0
<i>Desmodora sp 1</i>	0.88	4.42	0.38	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
<i>Desmoscolex sp 1</i>	1.30	0.00	0.00	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	1
<i>Diplolaimella sp 1</i>	0.11	0.00	0.00	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1	0	0
<i>Diplolaimelloides sp 1</i>	0.04	0.04	0.00	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0
<i>Dolicholaimus sp 1</i>	0.50	0.00	0.00	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	1	0	0
<i>Doliolaimus sp 1</i>	0.00	0.00	0.11	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	1	0
<i>Dorylaimopsis sp 1</i>	0.15	0.00	0.00	0	0	1	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0
<i>Dorylaimopsis sp 2</i>	0.15	0.46	0.00	0	0	1	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0
<i>Epacanthion sp 1</i>	0.00	0.00	0.31	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	0	1	0

<i>Gammanema sp 1</i>	0.08	0.00	0.00	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0
<i>Halalaimus gracilis</i>	0.38	0.00	0.08	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1
<i>Halalaimus sp 1</i>	0.00	0.50	1.11	1	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	1
<i>Halalaimus sp 2</i>	0.00	0.23	0.53	1	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	1
<i>Halalaimus sp 2</i>	0.00	0.19	0.42	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1
<i>Halanonchus sp 1</i>	0.23	0.00	0.00	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
<i>Halichoanolaimus chordiurus</i>	0.00	0.00	0.11	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	0	1	0
<i>Halichoanolaimus robustus</i>	0.95	1.60	0.00	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0
<i>Halichoanolaimus sp 1</i>	0.08	2.10	0.00	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0
<i>Halichoanolaimus sp 2</i>	0.11	0.00	0.00	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	1	0
<i>Hopperia sp 1</i>	0.95	0.00	0.00	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	1	0	0
<i>Longicytholaimus sp 1</i>	0.00	0.00	0.50	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	1	0
<i>Marylynnia sp 1</i>	0.23	0.00	0.00	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	1	0
<i>Mesacanthion sp 1</i>	0.19	0.00	0.00	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	0	1	0
<i>Metalinhomoeus longiseta</i>	0.08	0.00	0.50	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	1	0	0
<i>Metalinhomoeus sp 1</i>	0.19	0.00	0.00	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	1	0	0
<i>Metasphaerolaimus sp 1</i>	0.00	0.00	0.38	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	1	0
<i>Metasphaerolaimus sp 2</i>	1.33	0.04	0.27	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	1	0
<i>Meyersia minor</i>	0.08	0.00	0.00	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0
<i>Meyersia sp 1</i>	0.23	0.15	0.23	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0
<i>Meyersia sp 2</i>	0.46	0.00	0.00	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0
<i>Microlaimus sp 1</i>	0.15	0.00	0.08	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	1	0	0
<i>Minolaimus sp 1</i>	0.04	0.00	0.00	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0

<i>Oncholaimus attenuatus</i>	0.00	0.00	0.34	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	
<i>Oncholaimus mediterraneus</i>	0.11	0.00	0.00	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	1	
<i>Oxystomina affinis</i>	0.42	0.00	0.00	1	0	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	1	
<i>Oxystomina sp 1</i>	0.61	0.08	0.00	1	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	
<i>Paralinhomoeus filiformis</i>	0.11	0.08	0.00	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	
<i>Paralinhomoeus lepturus</i>	0.34	0.84	0.00	0	1	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	
<i>Paralinhomoeus sp 1</i>	0.57	0.76	0.00	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	
<i>Paralinhomoeus sp 2</i>	0.42	0.00	0.08	0	1	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	
<i>Parasphaerolaimus sp 1</i>	1.45	0.92	0.00	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	
<i>Pierickia sp 1</i>	0.23	0.00	0.00	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0
<i>Pierickia sp 2</i>	0.00	0.00	0.11	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0
<i>Prooncholaimus sp 1</i>	0.69	0.00	0.00	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
<i>Pselionema hexalatum</i>	0.46	1.26	0.00	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0
<i>Pselionema sp 1</i>	0.11	1.11	0.00	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0
<i>Pterygonema Platti</i>	0.19	0.00	0.00	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	1	0
<i>Pterygonema sp 1</i>	0.34	1.83	0.00	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	1	0
<i>Richtersia sp 1</i>	0.23	0.00	0.00	0	1	0	0	0	0	1	0	1	0	0	0	1		0	0	0	1	0
<i>Sabatieria Ornata</i>	0.65	0.00	0.11	0	1	0	0	0	0	0	1	0	0	1	0		1	0	1	0	0	0
<i>Sabatieria praedatrix</i>	0.00	0.00	0.11	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0
<i>Sabatieria Pulchra</i>	0.50	0.00	0.00	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0
<i>Sabatieria Punctata</i>	0.42	0.00	0.00	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0
<i>Sabatieria sp 1</i>	0.88	0.00	0.00	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0
<i>Sabatieria sp 2</i>	0.42	0.00	0.00	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0
<i>Sabatieria sp 3</i>	1.41	0.00	0.00	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0

<i>Setosabatieria sp 1</i>	2.06	0.00	0.92	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0		
<i>Siphnolaimus ewensis</i>	1.11	0.88	0.38	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	1	0		
<i>Southerniella sp 1</i>	1.14	0.38	0.00	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	
<i>Sphaerolaimus balticus</i>	0.15	0.00	0.00	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	
<i>Sphaerolaimus gracilis</i>	2.21	2.36	0.00	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	
<i>Sphaerolaimus sp 1</i>	0.00	0.00	0.42	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	
<i>Subsphaerolaimus sp 1</i>	0.00	0.00	0.08	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	
<i>Synonchiella sp 1</i>	1.68	0.34	0.19	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	
<i>Terschellingia Longicaudata</i>	1.18	4.73	0.04	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	
<i>Theristus ensifer</i>	0.42	3.13	0.04	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	1	0	0
<i>Theristus heterospiculum</i>	1.98	0.00	0.08	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	1	0	0
<i>Theristus interstitialis</i>	0.92	0.00	0.00	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	1	0	0
<i>Tricoma sp 1</i>	0.19	0.00	0.00	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	1
<i>Trissonchulus sp 1</i>	0.46	1.18	0.00	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	
<i>Viscosia sp 1</i>	0.04	0.00	0.34	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	
<i>Viscosia sp 2</i>	0.42	0.53	0.00	0	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	
<i>Viscosia viscosa</i>	0.50	0.00	0.00	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	
<i>Voscosia sp 3</i>	0.15	0.00	0.00	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	
<i>Vasostoma sp 1</i>	0.57	0.57	0.00	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	1	0	0
<i>Wieseria sp 1</i>	0.23	0.31	0.00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1

1A= selective deposit feeders, 1B= non-selective deposit feeders, 2A=epigrowth feeders, 2B= predators (Wiser, 1953). R= round. E/F= elongated/filiform, CO= conical, CA= clavate. ST= stout, L/T= long/thin, C-P= coloniser-persister score (Bongers et al., 1991, 1995. Pape et al., 2013), 1= species belonging trait, 0= species not belonging trait.