

Supplementary information TABLE S1: List of fish taxa recorded in pet shops in the eight provinces of South Africa in 2018.

	Family	Genus	No. of pet shops	% frequency of occurrence	No. of provinces	Introduction status	Impact status	Natural environment	Native range	Temperature (°C)	Climatic zone	References
<i>Acanthurus leucosternon</i>	Acanthuridae	<i>Acanthurus</i>	8	8.3	2			Marine	Indian Ocean	23 - 28	Tropical	
<i>Acanthurus lineatus</i>	Acanthuridae	<i>Acanthurus</i>	6	6.3	3			Marine	Indian Ocean	24 - 30	Tropical	
<i>Acanthurus tennentii</i>		<i>Acanthurus</i>										
<i>Acantopsis dialuzona</i>	Acanthuridae	<i>Acantopsis</i>	7	7.3	2			Marine	Indo-Pacific	24 - 30	Tropical	
<i>Agamyxis pectinifrons</i>	Cobitidae	<i>Agamyxis</i>	6	6.3	3			Freshwater	Asia	25 - 28	Tropical	
Alestiidae	Doradidae		3	3.1	1			Freshwater	South America	20 - 26	Tropical	
<i>Alloophorus robustus</i>	Alestiidae	<i>Alloophorus</i>	3	3.1	3			Freshwater, brackish	Africa		Tropical	
<i>Altolamprologus compressiceps</i>	Goodeidae	<i>Altolamprologus</i>	1	1.0	1			Freshwater	Central America	21 - 25	Tropical	
<i>Amatitlania nigrofasciata</i>	Cichlidae	<i>Amatitlania</i>	34	35.4	3			Freshwater	Central America	21 - 25	Tropical	
<i>Amphilius jacksonii</i>	Cichlidae	<i>Amphilius</i>	32	33.3	6			Freshwater	Central America	20 - 36	Tropical	Esmaili et al., 2014
<i>Amphiprion percula</i>	Amphiprionidae	<i>Amphiprion</i>	1	1.0	1			Freshwater	Africa	20 - 24	Tropical	
<i>Amphiprion</i> spp.	Pomacentridae	<i>Amphiprion</i>	15	15.6	3			Marine	Indo-West Pacific		Tropical	
<i>Ancistrus</i> spp.	Pomacentridae	<i>Ancistrus</i>	1	1.0	1			Marine	Indo-West Pacific		Tropical	
<i>Andinoacara rivulatus</i>	Loricariidae	<i>Andinoacara</i>	7	7.3	2			Freshwater	South America	–	Tropical	
<i>Aphyocharax anisitsi</i>	Loricariidae	<i>Aphyocharax</i>	28	29.2	6			Freshwater	South America		Tropical	
<i>Aplocheilichthys panchax</i>	Cichlidae	<i>Aplocheilichthys</i>	6	6.3	3			Freshwater	South America	20 - 24	Tropical	
Apteronotidae	Characidae		20	20.8	4			Freshwater	South America	18 - 28	Subtropical	
<i>Apteronotus albifrons</i>	Aplocheilichthys	<i>Apteronotus</i>	1	1.0	1			Freshwater, brackish	Asia	20 - 25	Tropical	
Aspredinidae	Apteronotidae		13	13.5	2			Freshwater	South America		Tropical	
<i>Aspredo aspredo</i>	Apteronotidae	<i>Aspredo</i>	27	28.1	7			Freshwater	South America	23 - 28	Tropical	
<i>Astronotus ocellatus</i>	Aspredinidae	<i>Astronotus</i>	2	2.1	1			Freshwater, brackish	South America		Tropical	
<i>Astronotus</i> spp.	Aspredinidae	<i>Astronotus</i>	1	1.0	1			Freshwater, brackish	Central and South America	–	Tropical	
<i>Aulonocara jacobfreibergi</i>	Cichlidae	<i>Aulonocara</i>	35	36.5	7			Freshwater	South America	22 - 25	Tropical	
<i>Aulonocara nyassae</i>	Cichlidae	<i>Aulonocara</i>	5	5.2	2			Freshwater	South America		Tropical	
<i>Aulonocara</i> spp.	Cichlidae	<i>Aulonocara</i>	15	15.6	4			Freshwater	Africa	24 - 26	Tropical	
<i>Balantiocheilus melanopterus</i>	Cichlidae	<i>Balantiocheilus</i>	3	3.1	3			Freshwater	Africa	–	Tropical	
<i>Barbodes semifasciolatus</i>	Cichlidae	<i>Barbodes</i>	33	34.4	7			Freshwater	Africa		Tropical	
<i>Barbonymus altus</i>	Cyprinidae	<i>Barbonymus</i>	46	47.9	8			Freshwater	Asia	22 - 28	Tropical	
<i>Barbonymus schwanenfeldii</i>	Cyprinidae	<i>Barbonymus</i>	2	2.1	2			Freshwater	Asia	18 - 24	Subtropical	
<i>Beaufortia kweichowensis</i>	Cyprinidae	<i>Beaufortia</i>	4	4.2	2			Freshwater	Asia	22 - 27	Tropical	
<i>Beryx</i> spp.	Cyprinidae	<i>Beryx</i>	42	43.8	7			Freshwater	Asia	22 - 25	Tropical	
<i>Betta</i> spp.	Cyprinidae	<i>Betta</i>	4	4.2	1			Freshwater	Asia	–	Subtropical	
<i>Betta splendens</i>	Berycidae	<i>Betta</i>	1	1.0	1			Marine	Western Pacific		Subtropical	
<i>Boehlkea fredcochui</i>	Osphronemidae	<i>Boehlkea</i>	27	28.1	7			Freshwater	Asia		Tropical	
<i>Botia almorhae</i>	Osphronemidae	<i>Botia</i>	74	77.1	8	E	DD	Freshwater	Asia	24 - 30	Tropical	Hammer et al., 2019
<i>Botia dario</i>	Characidae	<i>Botia</i>	1	1.0	1			Freshwater	South America	22 - 26	Tropical	
<i>Botia lohachata</i>	Cobitidae	<i>Botia</i>	32	33.3	7			Freshwater	Asia	–	Tropical	
<i>Botia striata</i>	Cobitidae	<i>Botia</i>	7	7.3	3			Freshwater	Asia	–	Tropical	
<i>Brachygobius doriae</i>	Cobitidae	<i>Brachygobius</i>	23	24.0	5			Freshwater	Asia	24 - 30	Tropical	
<i>Brachygobius</i> spp.	Cobitidae	<i>Brachygobius</i>	9	9.4	3			Freshwater	Asia	23 - 26	Tropical	
<i>Brachygobius</i> spp. 2	Gobiidae	<i>Brachygobius</i>	2	2.1	2			Freshwater, brackish	Asia		Tropical	
<i>Brachygobius xanthozonus</i>	Gobiidae	<i>Brachygobius</i>	1	1.0	1			Freshwater	Asia	22 - 29	Tropical	
<i>Calloplestios altivelis</i>	Gobiidae	<i>Calloplestios</i>	23	24.0	7			Freshwater, brackish	Asia		Tropical	
<i>Calloplestios</i> spp.	Gobiidae	<i>Calloplestios</i>	1	1.0	1			Freshwater	Asia	25 - 30	Tropical	
<i>Carassius auratus</i>	Plesiopidae	<i>Carassius</i>	76	79.2	8			Marine	Indo-Pacific		Tropical	
<i>Carassius gibelio</i>	Plesiopidae	<i>Carassius</i>	1	1.0	1			Marine	Indo-Pacific		Tropical	
<i>Carassius</i> spp.	Cyprinidae	<i>Carassius</i>	85	88.5	8	E	DD	Freshwater	Asia	0 - 41	Subtropical	GISD, Esmaili et al., 2014; Wouters et al., 2012; Luskova et al., 2010; Elender & Weyl, 2014; Marr et al. 2017
<i>Centropyge eibli</i>	Cyprinidae	<i>Centropyge</i>	1	1.0	1	E	DD	Freshwater	Europe, Asia	10 - 20	Subtropical	Esmaili et al., 2014; Tarkan et al., 2012; Tsoumani et al., 2006; Bulut et al., 2013; Kirankaya & Ekmecki, 2013; Agdamar & Tarkan, 2019; Tarkan et al., 2012
<i>Centropyge loricula</i>	Cyprinidae	<i>Centropyge</i>	7	7.3	2			Freshwater	Europe, Asia		Subtropical	
<i>Centropyge aurantonotus</i>	Pomacanthidae	<i>Centropyge</i>	1	1.0	1			Marine	Eastern Indian Ocean	–	Tropical	
<i>Chaetodon</i> spp.	Pomacanthidae	<i>Chaetodon</i>	1	1.0	1			Marine	Pacific Ocean	–	Tropical	
<i>Chaetodon wiebeli</i>	Pomacanthidae	<i>Chaetodon</i>	7	7.3	3			Marine	Western Atlantic	–	Tropical	
Channidae	Chaetodontidae		51	53.1	8			Marine	Western Atlantic		Tropical	
<i>Chitala ornata</i>	Chaetodontidae	<i>Chitala</i>	1	1.0	1			Marine	Western Pacific	–	Tropical	

<i>Chromobotia macracanthus</i>	Channidae	<i>Chromobotia</i>	2	2.1	1		Freshwater	Asia		Tropical	
<i>Chrysiptera springeri</i>	Notopteridae	<i>Chrysiptera</i>	9	9.4	4		Freshwater	Asia	24 - 28	Tropical	Kumudinie & Wijeyaratne, 2005; Castro et al., 2018; Castro et al., 2019; Shiranta 2016, Marambe et al., 2011
<i>Cichla ocellaris</i>	Botiidae	<i>Cichla</i>	20	20.8	6		Freshwater	Asia	25 - 30	Tropical	
<i>Cichla</i> spp.	Pomacentridae	<i>Cichla</i>	10	10.4	3		Marine	Western Pacific		Tropical	
Cichlidae	Cichlidae		31	32.3	7		Freshwater	South America	24 - 27	Tropical	
<i>Cirrhilabrus cyanogularis</i>	Cichlidae	<i>Cirrhilabrus</i>	1	1.0	1		Freshwater	South America	25 - 27	Tropical	
<i>Cirrhilabrus cyanopleura</i>	Cichlidae	<i>Cirrhilabrus</i>	10	10.4	3		Freshwater	South America	26 - 27	Tropical	
<i>Cirrhilabrus lubbocki</i>	Labridae	<i>Cirrhilabrus</i>	2	2.1	2		Marine	Indo-West Pacific	–	Tropical	
<i>Cirrhilabrus</i> spp.	Labridae	<i>Cirrhilabrus</i>	11	11.5	3		Marine	Indo-West Pacific	23 - 28	Tropical	
Citharinidae	Labridae		9	9.4	3		Marine	Western Central Pacific	24 - 28	Tropical	
<i>Clarias fuscus</i>	Labridae	<i>Clarias</i>	10	10.4	2		Marine	Western Central Pacific	24 - 29	Tropical	
<i>Copadichromis borleyi</i>	Citharinidae	<i>Copadichromis</i>	1	1.0	1		Freshwater	South America		Tropical	
<i>Corydoras aeneus</i>	Clariidae	<i>Corydoras</i>	1	1.0	1		Freshwater	Asia		Subtropical	
<i>Corydoras habrosus</i>	Cichlidae	<i>Corydoras</i>	16	16.7	5		Freshwater	Africa	24 - 26	Tropical	
<i>Corydoras melanistius</i>	Callichthyidae	<i>Corydoras</i>	64	66.7	8		Freshwater	South America	25 - 28	Subtropical	
<i>Corydoras paleatus</i>	Callichthyidae	<i>Corydoras</i>	27	28.1	7		Freshwater	South America	25 - ?	Tropical	
<i>Corydoras panda</i>	Callichthyidae	<i>Corydoras</i>	1	1.0	1		Freshwater	South America	22 - 26	Tropical	
<i>Corydoras punctatus</i>	Callichthyidae	<i>Corydoras</i>	54	56.3	8		Freshwater	South America	18 - 23	Subtropical	
<i>Corydoras</i> spp.	Callichthyidae	<i>Corydoras</i>	6	6.3	2		Freshwater	South America	20 - 25	Tropical	
<i>Corydoras sterbai</i>	Callichthyidae	<i>Corydoras</i>	7	7.3	2		Freshwater	South America	22 - 26	Tropical	
<i>Cromileptes altivelis</i>	Callichthyidae	<i>Cromileptes</i>	4	4.2	2		Freshwater	South America	22 - 26	Tropical	
<i>Cryptocentrus cinctus</i>	Callichthyidae	<i>Cryptocentrus</i>	30	31.3	6		Freshwater	South America	21 - 25	Tropical	
<i>Ctenochaetus binotatus</i>	Serranidae	<i>Ctenochaetus</i>	1	1.0	1		Marine	Western Pacific	–	Tropical	
<i>Ctenochaetus</i> spp.	Gobiidae	<i>Ctenochaetus</i>	11	11.5	3		Marine	Western Pacific	22 - 28	Tropical	
<i>Ctenochaetus strigosus</i>	Acanthuridae	<i>Ctenochaetus</i>	9	9.4	3		Marine	Indo-Pacific	–	Tropical	
<i>Cubanichthys cubensis</i>	Acanthuridae	<i>Cubanichthys</i>	5	5.2	2		Marine	Indo-Pacific	–	Tropical	
<i>Cyphotilapia frontosa</i>	Acanthuridae	<i>Cubanichthys</i>	4	4.2	1		Marine	Eastern Central Pacific	21 - 27	Tropical	
Cyprinidae	Cyprinodontidae		1	1.0	1		Freshwater	Central America	23 - 28	Tropical	
<i>Cyprinus carpio</i>	Cichlidae	<i>Cyprinus</i>	32	33.3	7		Freshwater	Africa	24 - 26	Tropical	
<i>Cyprinus rubrofuscus</i>	Cyprinidae	<i>Cyprinus</i>	3	3.1	3		Freshwater	Asia	–	Tropical	
<i>Cyrtocara moorii</i>	Cyprinidae	<i>Cyrtocara</i>	64	66.7	7	E	Freshwater, brackish	Europe to Asia	Mar-35	Subtropical	GISD; Esmaeili et al., 2014; Marambe et al., 2011; Ellender & Weyl, 2014; Marr et al. 2017; Brosse et al. 2021
<i>Danio erythromicron</i>	Cyprinidae	<i>Danio</i>	1	1.0	1		Freshwater	Asia	–	Tropical	
<i>Danio margaritatus</i>	Cichlidae	<i>Danio</i>	67	69.8	7		Freshwater	Africa	24 - 26	Tropical	
<i>Danio rerio</i>	Cyprinidae	<i>Danio</i>	1	1.0	1		Freshwater	Asia	21 - 25	Tropical	
<i>Danio</i> spp.	Cyprinidae	<i>Danio</i>	1	1.0	1		Freshwater	Asia	–	Tropical	
<i>Danioides polota</i>	Cyprinidae	<i>Danioides</i>	63	65.6	8		Freshwater	Asia	18 - 24	Tropical	
<i>Dermogenys pusilla</i>	Cyprinidae	<i>Dermogenys</i>	3	3.1	1		Freshwater	Asia	–	Tropical	
<i>Desmopuntius hexazona</i>	Datnioididae	<i>Desmopuntius</i>	1	1.0	1		Freshwater	Asia, Oceania	22 - 26	Tropical	
<i>Desmopuntius pentazona</i>	Zenarchopteridae	<i>Desmopuntius</i>	6	6.3	2		Freshwater, brackish, marine	Asia	24 - 28	Tropical	
<i>Devario aequipinnatus</i>	Cyprinidae	<i>Devario</i>	6	6.3	4		Freshwater	Asia	–	Tropical	
<i>Ecesenius bicolor</i>	Cyprinidae	<i>Ecesenius</i>	16	16.7	4		Freshwater	Asia	26 - 29	Tropical	
<i>Ecesenius lineatus</i>	Cyprinidae	<i>Ecesenius</i>	4	4.2	3		Freshwater	Asia	22 - 24	Tropical	
<i>Ecesenius midas</i>	Blenniidae	<i>Ecesenius</i>	14	14.6	4		Marine	Indo-Pacific	–	Tropical	
<i>Epalzeorhynchus bicolor</i>	Blenniidae	<i>Epalzeorhynchus</i>	14	14.6	3		Marine	Indo-West Pacific	–	Tropical	
<i>Epalzeorhynchus frenatum</i>	Blenniidae	<i>Epalzeorhynchus</i>	10	10.4	3		Marine	Indo-Pacific	–	Tropical	
<i>Epalzeorhynchus kalopterus</i>	Cyprinidae	<i>Epalzeorhynchus</i>	4	4.2	2		Freshwater	Asia	22 - 26	Tropical	
<i>Erpetoichthys calabaricus</i>	Cyprinidae	<i>Erpetoichthys</i>	60	62.5	8		Freshwater	Asia	24 - 27	Tropical	
<i>Erpetoichthys</i> spp.	Cyprinidae	<i>Erpetoichthys</i>	20	20.8	6		Freshwater	Asia	24 - 26	Tropical	
<i>Farlowella</i> spp.	Polypteridae	<i>Farlowella</i>	6	6.3	2		Freshwater	Africa	22 - 28	Tropical	
<i>Feia nympa</i>	Polypteridae	<i>Feia</i>	8	8.3	5		Freshwater	Africa	–	Tropical	
<i>Fistularia tabacaria</i>	Loricariidae	<i>Fistularia</i>	5	5.2	2		Freshwater	South America	–	Tropical	
<i>Fromia indica</i>	Gobiidae	<i>Fromia</i>	42	43.8	7		Marine	Indo-Pacific	–	Tropical	
<i>Fromia milleporella</i>	Gobiidae	<i>Fromia</i>	4	4.2	3		Marine	Eastern Atlantic	–	Tropical	
<i>Fundulus</i> spp.	Goniasteridae	<i>Fundulus</i>	1	1.0	1		Marine	Indian and Western Pacific	–	Tropical	
<i>Galeocерdo cuvier</i>	Goniasteridae	<i>Galeocерdo</i>	13	13.5	3		Marine	Indo-West Pacific	–	Tropical	
<i>Garra flavatra</i>	Fundulidae	<i>Garra</i>	1	1.0	1		Freshwater, brackish, marine	North America	–	Tropical	
<i>Gasteropelecus sternicla</i>	Carcharhinidae	<i>Gasteropelecus</i>	1	1.0	1		Marine, brackish	Western Atlantic	–	Subtropical	
<i>Gigantura indica</i>	Cyprinidae	<i>Gigantura</i>	15	15.6	5		Freshwater	Asia	–	Tropical	
<i>Gnathonemus petersii</i>	Gasteropelecidae	<i>Gnathonemus</i>	1	1.0	1		Freshwater	South America	–	Tropical	

Gobiidae	Giganturidae		1	1.0	1			Marine	Circumglobal			Tropical	
<i>Gobiodon okinawae</i>	Mormyridae	<i>Gobiodon</i>	14	14.6	3			Freshwater	Africa	22 - 28		Tropical	
<i>Gobioides broussonnetii</i>	Gobiidae	<i>Gobioides</i>	1	1.0	1			Marine, brackish	Eastern Atlantic			Tropical	
<i>Gramma loreto</i>	Gobiidae	<i>Gramma</i>	15	15.6	3			Marine	Western Pacific	20 - 25		Tropical	
<i>Gymnocorymbus ternetzi</i>	Gobiidae	<i>Gymnocorymbus</i>	1	1.0	1			Freshwater, brackish, marine	Western Atlantic	14 - 32		Tropical	
<i>Gymnogeophagus balzanii</i>	Grammatidae	<i>Gymnogeophagus</i>	6	6.3	3			Marine	Western Central Atlantic	22 - 27		Tropical	
<i>Gyrinocheilus aymonieri</i>	Characidae	<i>Gyrinocheilus</i>	68	70.8	8			Freshwater	South America	20 - 26		Subtropical	
<i>Haplochromis latifasciatus</i>	Cichlidae	<i>Haplochromis</i>	1	1.0	1			Freshwater	South America	22 - 26		Subtropical	
<i>Haplochromis obliquidens</i>	Gyrinocheilidae	<i>Haplochromis</i>	67	69.8	8			Freshwater	Asia	25 - 28		Tropical	
<i>Haplochromis</i> spp.	Cichlidae	<i>Haplochromis</i>	16	16.7	6			Freshwater	Africa	–		Tropical	
<i>Hasemania melanura</i>	Cichlidae	<i>Hasemania</i>	10	10.4	3			Freshwater	Africa	24 - 26		Tropical	
<i>Hasemania nana</i>	Cichlidae	<i>Hasemania</i>	1	1.0	1			Freshwater	Africa	–		Tropical	
<i>Hasemania</i> spp.	Characidae	<i>Hasemania</i>	7	7.3	4			Freshwater	South America	–		Tropical	
<i>Helostoma temminckii</i>	Characidae	<i>Helostoma</i>	3	3.1	3			Freshwater	South America	22 - 28		Tropical	
<i>Hemiancistrus</i> spp.	Characidae	<i>Hemiancistrus</i>	45	46.9	6			Freshwater	South America	–		Tropical	
<i>Hemichromis bimaculatus</i>	Helostomatidae	<i>Hemichromis</i>	57	59.4	8			Freshwater	Asia	22 - 28		Tropical	
<i>Hemichromis</i> spp.	Loricariidae	<i>Hemichromis</i>	1	1.0	1			Freshwater, brackish, marine	South America	–		Tropical	
<i>Hemigrammus erythrozonus</i>	Cichlidae	<i>Hemigrammus</i>	35	36.5	7			Freshwater, brackish	Africa	21 - 23		Tropical	
<i>Hemigrammus falsus</i>	Cichlidae	<i>Hemigrammus</i>	15	15.6	4			Freshwater, brackish	Africa	–		Tropical	
<i>Hemigrammus ocellifer</i>	Characidae	<i>Hemigrammus</i>	52	54.2	7			Freshwater	South America	24 - 28		Tropical	
<i>Hemigrammus rhodostomus</i>	Characidae	<i>Hemigrammus</i>	6	6.3	2			Freshwater	South America	–		Tropical	
<i>Hemigrammus rodwayi</i>	Characidae	<i>Hemigrammus</i>	2	2.1	2			Freshwater	South America	22 - 26		Tropical	
<i>Hemigrammus falsus</i>	Characidae	<i>Hemigrammus</i>	10	10.4	3			Freshwater	South America	–		Tropical	
<i>Heniochus acuminatus</i>	Characidae	<i>Heniochus</i>	1	1.0	1			Freshwater	South America	24 - 28		Tropical	
<i>Herichthys cyanoguttatus</i>	Characidae	<i>Herichthys</i>	1	1.0	1			Freshwater	South America	–		Tropical	
<i>Heros efasciatus</i>	Chaetodontidae	<i>Heros</i>	10	10.4	3			Marine, brackish	Indo-Pacific	–		Tropical	
<i>Heros severus</i>	Cichlidae	<i>Heros</i>	1	1.0	1	E	DD	Freshwater	North America	20 - 33		Subtropical	Lorenz, 2008; Lorenz et al., 2010, 2015; Lorenz & Conell, 2011
<i>Horabagrus brachysoma</i>	Cichlidae	<i>Horabagrus</i>	6	6.3	1	E	DD	Freshwater	South America	24 - 32		Tropical	Brosse et al., 2021
<i>Hyphessobrycon anisitsi</i>	Cichlidae	<i>Hyphessobrycon</i>	35	36.5	6			Freshwater, brackish	South America	23 - 29		Tropical	
<i>Hyphessobrycon colombianus</i>	Bagridae	<i>Hyphessobrycon</i>	8	6.5	5			Freshwater, brackish	Asia, South America	23 - 25		Tropical, subtropical	
<i>Hyphessobrycon eques</i>	Characidae	<i>Hyphessobrycon</i>	4	4.2	3			Freshwater	South America	–		Tropical	
<i>Hyphessobrycon herbertaxelrodi</i>	Characidae	<i>Hyphessobrycon</i>	2	2.1	1			Freshwater	South America	–		Tropical	
<i>Hyphessobrycon pulchripinnis</i>	Characidae	<i>Hyphessobrycon</i>	43	44.8	8			Freshwater	South America	–		Tropical	
<i>Hyphessobrycon sweglesi</i>	Characidae	<i>Hyphessobrycon</i>	70	72.9	8			Freshwater	South America	23 - 27		Tropical	
<i>Hyphessobrycon columbianus</i>	Characidae	<i>Hyphessobrycon</i>	52	54.2	7			Freshwater	South America	23 - 28		Tropical	
<i>Hypostomus plecostomus</i>	Characidae	<i>Hypostomus</i>	20	20.8	6			Freshwater	South America	20 - 23		Tropical	
<i>Hypostomus</i> spp.	Characidae	<i>Hypostomus</i>	1	1.0	1			Freshwater	South America	–		Tropical	
<i>Hypostomus ventromaculatus</i>	Loricariidae	<i>Hypostomus</i>	25	26.0	7			Freshwater	South America	20 - 28		Tropical	Marambe et al., 2011
<i>Hypselecara</i> spp.	Loricariidae	<i>Hypselecara</i>	45	46.9				Freshwater	South America	–		Tropical	
<i>Hypsibarbus wetmorei</i>	Loricariidae	<i>Hypsibarbus</i>	1	1.0	1			Freshwater	South America	–		Tropical	
<i>Hypsophrys nicaraguensis</i>	Cichlidae	<i>Hypsophrys</i>	1	1.0	1			Freshwater	South America	–		Tropical	
<i>Inpaichthys kerri</i>	Cyprinidae	<i>Inpaichthys</i>	12	12.5	5			Freshwater	Asia	–		Tropical	
<i>Koumansetta rainfordi</i>	Cichlidae	<i>Koumansetta</i>	1	1.0	1			Freshwater	Central America	23 - 36		Tropical	
<i>Kryptopterus bicirrhis</i>	Characidae	<i>Kryptopterus</i>	6	6.3	2			Freshwater	South America	24 - 27		Tropical	
<i>Kryptopterus vitreolus</i>	Gobiidae	<i>Kryptopterus</i>	11	11.5	3			Marine	Western Pacific	22 - 30		Tropical	
<i>Labeo chrysophekadion</i>	Siluridae	<i>Labeo</i>	2	2.1	2			Freshwater	Asia	21 - 26		Tropical	
<i>Labeobarbus</i> spp.	Siluridae	<i>Labeobarbus</i>	15	15.6	2			Freshwater	Asia	–		Tropical	
<i>Laubuka</i> spp.	Cyprinidae	<i>Laubuka</i>	6	6.3	2			Freshwater	Asia	24 - 27		Tropical	
<i>Leptobotia elongata</i>	Cyprinidae	<i>Leptobotia</i>	2	2.1	2			Freshwater	Africa	–		Tropical	
<i>Lethrinus laticaudis</i>	Cyprinidae	<i>Lethrinus</i>	23	24.0	5			Freshwater	Asia	–		Tropical	
<i>Lethrinus nebulosus</i>	Cobitidae	<i>Lethrinus</i>	4	4.2	3			Freshwater	Asia	22 - 28		Subtropical	
<i>Macropodus opercularis</i>	Lethrinidae	<i>Macropodus</i>	1	1.0	1			Marine, brackish	Western Pacific	–		Tropical	
<i>Macrotocinclus affinis</i>	Lethrinidae	<i>Macrotocinclus</i>	5	5.2	2			Marine, brackish	Indo-West Pacific	–		Tropical	
<i>Marcusenius livingstonii</i>	Cichlidae	<i>Marcusenius</i>	1	1.0	1			Freshwater	Africa	24 - 26		Tropical	
Mastacembelidae	Osphronemidae		8	8.3	3			Freshwater	Asia	16 - 26		Tropical	
<i>Mastacembelus armatus</i>	Loricariidae	<i>Mastacembelus</i>	4	4.2	2			Freshwater	South America	20 - 26		Tropical	
<i>Mastacembelus armatus</i>	Mormyridae	<i>Mastacembelus</i>	9	9.4	4			Freshwater	Africa	–		Tropical	
<i>Maylandia callainos</i>	Mastacembelidae	<i>Maylandia</i>	7	7.3	2			Freshwater, brackish	Africa	–		Tropical	
<i>Maylandia estherae</i>	Mastacembelidae	<i>Maylandia</i>	8	8.3	2			Freshwater	Asia	22 - 28		Tropical	
<i>Maylandia greshakei</i>	Cichlidae	<i>Maylandia</i>	1	1.0	1			Freshwater	Africa	–		Tropical	
<i>Maylandia lombardoi</i>	Mastacembelidae	<i>Maylandia</i>	8	8.3	2			Freshwater, brackish	Asia	22 - 28		Tropical	

<i>Maylandia lombardoi</i>	Cichlidae	<i>Maylandia</i>	15	15.6	5		Freshwater	Africa	24 - 26	Tropical		
<i>Maylandia</i> spp.	Cichlidae	<i>Maylandia</i>	39	40.6	7		Freshwater	Africa	–	Tropical		
<i>Maylandia</i> spp.	Cichlidae	<i>Maylandia</i>	16	16.7	4		Freshwater	Africa	24 - 26	Tropical		
<i>Maylandia zebra</i>	Cichlidae	<i>Maylandia</i>	28	29.2	7		Freshwater	Africa	24 - 26	Tropical		
<i>Melanochromis auratus</i>	Cichlidae	<i>Melanochromis</i>	1	1.0	1		Freshwater	Africa	–	Tropical		
<i>Melanoaenia boesemani</i>	Cichlidae	<i>Melanoaenia</i>	1	1.0	1		Freshwater	Africa	22 - 28	Tropical		
<i>Melanoaenia fluviatilis</i>	Cichlidae	<i>Melanoaenia</i>	9	9.4	2		Freshwater	Africa	22 - 26	Tropical		
<i>Melanoaenia lacustris</i>	Melanoaeniidae	<i>Melanoaenia</i>	1	1.0	1		Freshwater	Asia	27 - 30	Tropical		
<i>Melanoaenia parkinsoni</i>	Melanoaeniidae	<i>Melanoaenia</i>	1	1.0	1		Freshwater	Oceania	22 - 25	Tropical		
<i>Melanoaenia praecox</i>	Melanoaeniidae	<i>Melanoaenia</i>	1	1.0	1		Freshwater	Oceania	20 - 24	Tropical		
<i>Melanoaenia</i> spp.	Melanoaeniidae	<i>Melanoaenia</i>	21	21.9	6		Freshwater	Oceania	26 - 30	Tropical		
<i>Melanoaenia trifasciata</i>	Melanoaeniidae	<i>Melanoaenia</i>	10	10.4	5		Freshwater	Asia	22 - 28	Tropical		
<i>Mendosoma lineatum</i>	Melanoaeniidae	<i>Mendosoma</i>	11	11.5	6		Freshwater	Asia	–	Tropical		
<i>Metynnys argenteus</i>	Melanoaeniidae	<i>Metynnys</i>	4	4.2	2		Freshwater	Oceania	25 - 30	Tropical		
<i>Metynnys hypsauchen</i>	Latridae	<i>Metynnys</i>	4	4.2	3		Marine	Subantarctic	–	Temperate		
<i>Metynnys lippincottianus</i>	Serrasalimidae	<i>Metynnys</i>	40	41.7	7		Freshwater	South America	24 - 28	Tropical		
<i>Micropterus salmoides</i>	Serrasalimidae	<i>Micropterus</i>	14	14.6	4		Freshwater	South America	24 - 28	Tropical		
<i>Mikrogeophagus ramirezi</i>	Serrasalimidae	<i>Mikrogeophagus</i>	6	6.3	2		Freshwater	South America	23 - 27	Tropical		
<i>Moenkhausia sanctaefilomenae</i>	Centrarchidae	<i>Moenkhausia</i>	2	2.1	1	E	MR	Freshwater	North America	Oct-32	Subtropical	Esmaili et al., 2014; Ellender & Weyl, 2014; Marr et al., 2017; Zengeya et al., 2017
<i>Monodactylus argenteus</i>	Cichlidae	<i>Monodactylus</i>	46	47.9	8		Freshwater	South America	27 - 30	Tropical		
Mullidae	Characidae		53	55.2	8		Freshwater	South America	22 - 26	Tropical		
<i>Myxocyprinus</i> spp.	Monodactylidae	<i>Myxocyprinus</i>	6	6.3	2		Marine	Indo-West Pacific	24 - 28	Tropical		
<i>Nannostomus beckfordi</i>	Mullidae	<i>Nannostomus</i>	4	4.2	1		Freshwater, brackish, marine	Atlantic, Indian and Pacific	–	Tropical, subtropical, temperate		
<i>Nannostomus mortenthaleri</i>	Catostomidae	<i>Nannostomus</i>	1	1.0	1		Freshwater	Asia	–	Subtropical		
<i>Nannostomus unifasciatus</i>	Lebiasinidae	<i>Nannostomus</i>	20	20.8	5		Freshwater	South America	24 - 26	Tropical		
<i>Naso lituratus</i>	Lebiasinidae	<i>Naso</i>	7	7.3	4		Freshwater	South America	–	Tropical		
<i>Nematobrycon lacortei</i>	Lebiasinidae	<i>Nematobrycon</i>	3	3.1	2		Freshwater	South America	25 - 28	Tropical		
<i>Nimbochromis livingstonii</i>	Acanthuridae	<i>Nimbochromis</i>	4	4.2	2		Marine	Eastern Indian Ocean	–	Tropical		
<i>Nimbochromis venustus</i>	Characidae	<i>Nimbochromis</i>	1	1.0	1		Freshwater	South America	23 - 27	Tropical		
<i>Novaculichthys</i> spp.	Cichlidae	<i>Novaculichthys</i>	17	17.7	5		Freshwater	Africa	25 - 28	Tropical		
<i>Oligoplites saurus</i>	Cichlidae	<i>Oligoplites</i>	22	22.9	6		Freshwater	Africa	25 - 27	Tropical		
<i>Oplegnathus woodwardi</i>	Labridae	<i>Oplegnathus</i>	5	5.2	2		Marine	Indo-Pacific	–	Tropical		
<i>Osphronemus exodon</i>	Carangidae	<i>Osphronemus</i>	2	2.1	1		Marine, brackish	Western Atlantic	–	Subtropical		
<i>Osphronemus goramy</i>	Oplegnathidae	<i>Osphronemus</i>	29	30.2	6		Marine	Eastern Indian Ocean	–	Temperate		
<i>Osteoglossum bicirrhosum</i>	Osphronemidae	<i>Osteoglossum</i>	1	1.0	1		Freshwater	Asia	–	Tropical		
<i>Panaqolus maccus</i>	Osphronemidae	<i>Panaqolus</i>	24	25.0	6		Freshwater	Asia	–	Tropical		
<i>Panaque nigrolineatus</i>	Osteoglossidae	<i>Panaque</i>	10	10.4	2		Freshwater	South America	24 - 30	Tropical		
<i>Pangasius sanitwongsei</i>	Loricariidae	<i>Pangasius</i>	1	1.0	1		Freshwater	South America	22 - 26	Tropical		
<i>Pangasius</i> spp.	Pangasiidae	<i>Pangasius</i>	6	6.3	3	B3	DD	Freshwater	Asia	–	Tropical	Ellender & Weyl, 2014; Marr et al., 2017
<i>Pangio kuhlii</i>	Pangasiidae	<i>Pangio</i>	19	19.8	4		Freshwater	Asia	–	Tropical		
<i>Paracanthurus hepatus</i>	Cobitidae	<i>Paracanthurus</i>	39	40.6	8		Freshwater	Asia	24 - 30	Tropical		
<i>Paracheirodon axelrodi</i>	Acanthuridae	<i>Paracheirodon</i>	12	12.5	3		Marine	Indo-Pacific	–	Tropical		
<i>Paracheirodon innesi</i>	Characidae	<i>Paracheirodon</i>	29	30.2	7		Freshwater	South America	23 - 27	Tropical		
<i>Paralabrax clathratus</i>	Characidae	<i>Paralabrax</i>	60	62.5	8		Freshwater	South America	20 - 26	Tropical		
<i>Paraneetroplus synspilus</i>	Serranidae	<i>Paraneetroplus</i>	1	1.0	1		Marine	Eastern Pacific	–	Subtropical		
<i>Paretroplus loisellei</i>	Cichlidae	<i>Paretroplus</i>	1	1.0	1		Freshwater	Central America	24 - 30	Tropical		
<i>Pelvicachromis pulcher</i>	Cichlidae	<i>Pelvicachromis</i>	1	1.0	1		Freshwater	Africa	–	Tropical		
<i>Pethia conchonius</i>	Cichlidae	<i>Pethia</i>	36	37.5	8		Freshwater	Africa	24 - 25	Tropical		
<i>Pethia gelius</i>	Cyprinidae	<i>Pethia</i>	60	62.5	8		Freshwater	Asia	18 - 22	Subtropical		
<i>Pethia padamyia</i>	Cyprinidae	<i>Pethia</i>	17	17.7	6		Freshwater	Asia	18 - 22	Subtropical		
<i>Pethia conchonius</i>	Cyprinidae	<i>Pethia</i>	20	20.8	7		Freshwater	Asia	–	Tropical		
<i>Phenacogrammus interruptus</i>	Cyprinidae	<i>Phenacogrammus</i>	3	3.1	2		Freshwater	Asia	18 - 22	Subtropical		
<i>Phractocephalus hemioliopterus</i>	Alestidae	<i>Phractocephalus</i>	13	13.5	5		Freshwater	Africa	23 - 26	Tropical		
<i>Pimelodella</i> spp.	Pimelodidae	<i>Pimelodella</i>	9	9.4	4		Freshwater	South America	20 - 26	Tropical		
<i>Platax teira</i>	Heptapteridae	<i>Platax</i>	7	7.3	2		Freshwater, brackish, marine	South America	–	Tropical		
<i>Platydoras armatulus</i>	Ephippidae	<i>Platydoras</i>	1	1.0	1		Marine	Indo-West Pacific	–	Tropical		
<i>Poecilia latipinna</i>	Doradidae	<i>Poecilia</i>	21	21.9	7		Freshwater	South America	–	Subtropical		
<i>Poecilia latipunctata</i>	Poeciliidae	<i>Poecilia</i>	24	25.0	5	E	DD	Freshwater, brackish, marine	North America	20 - 28	Subtropical	Koutsikos et al., 2018; Ghazwan, 2020
<i>Poecilia reticulata</i>	Poeciliidae	<i>Poecilia</i>	16	16.7	4		Freshwater	North and Central America	24 - 30	Tropical		

<i>Poecilia</i> spp.	Poeciliidae	<i>Poecilia</i>	80	83.3	8	E	DD	Freshwater	South America	18 - 28	Tropical	GISD; Marambe et al., 2011; Marr et al., 2017; Ellender & Weyl, 2014; Brosse et al. 2021
<i>Poecilia sphenops</i>	Poeciliidae	<i>Poecilia</i>	75	78.1	8			Freshwater	South America		Tropical	
<i>Poecilia wingei</i>	Poeciliidae	<i>Polypterus</i>	5	5.2	2	E	DD	Freshwater, brackish	Central and South America	18 - 28	Tropical	Ramirez-Garcia et al., 2017
<i>Polypterus bichir</i>	Poeciliidae	<i>Polypterus</i>	13	13.5	2			Freshwater	South America	–	Tropical	
<i>Polypterus endlicheri</i>	Polypteridae	<i>Polypterus</i>	3	3.1	3			Freshwater	Africa	–	Tropical	
<i>Polypterus senegalus</i>	Polypteridae	<i>Polypterus</i>	5	5.2	2			Freshwater	Africa	–	Tropical	
<i>Pomacanthus imperator</i>	Polypteridae	<i>Pomacanthus</i>	5	5.2	3			Freshwater	Africa	25 - 28	Tropical	
<i>Pomacentrus alleni</i>	Pomacentridae	<i>Pomacentrus</i>	9	9.4	2			Marine	Indo-Pacific	–	Tropical	
<i>Potamotrygon</i> spp.	Pomacentridae	<i>Potamotrygon</i>	13	13.5	3			Marine	Eastern Indian Ocean	–	Tropical	
<i>Pristella maxillaris</i>	Potamotrygonidae	<i>Pristella</i>	1	1.0	1			Freshwater	South America	–	Tropical	
<i>Pseudanthias squamipinnis</i>	Characidae	<i>Pseudanthias</i>	29	30.2	8			Freshwater	South America	24 - 28	Tropical	
<i>Pseudomugil iriani</i>	Serranidae	<i>Pseudomugil</i>	9	9.4	3			Marine	Indo-West Pacific	22 - 28	Tropical	
<i>Pseudomugil</i> spp.	Melanotaeniidae	<i>Pseudomugil</i>	3	3.1	1			Freshwater	Asia	–	Tropical	
<i>Pseudoplatystoma fasciatum</i>	Melanotaeniidae	<i>Pseudoplatystoma</i>	1	1.0	1			Freshwater	Asia	–	Tropical	
<i>Pseudotropheus demasoni</i>	Pimelodidae	<i>Pseudotropheus</i>	7	7.3	3			Freshwater	South America	24 - 28	Tropical	
<i>Pterapogon kauderni</i>	Cichlidae	<i>Pterapogon</i>	49	51.0	8			Freshwater	Africa	–	Tropical	
<i>Pterophyllum</i> spp.	Apogonidae	<i>Pterophyllum</i>	12	12.5	4			Marine	Western Pacific	–	Tropical	
<i>Puntigrus tetrazona</i>	Cichlidae	<i>Puntigrus</i>	37	38.5	8			Freshwater	South America	–	Tropical	
<i>Puntius titteya</i>	Cyprinidae	<i>Puntius</i>	54	56.3	8			Freshwater	Asia	20 - 26	Tropical	
<i>Rasbora borapetensis</i>	Cyprinidae	<i>Rasbora</i>	30	31.3	8			Freshwater	Asia	23 - 27	Tropical	
<i>Rasbora trilineata</i>	Cyprinidae	<i>Rasbora</i>	20	20.8	7	E	DD	Freshwater	Asia	22 - 26	Tropical	Pallewatta et al., 2003.
<i>Rhinobatos productus</i>	Cyprinidae	<i>Rhinobatos</i>	36	37.5	6			Freshwater	Asia	23 - 25	Tropical	
<i>Rocio octofasciata</i>	Rhinobatidae	<i>Rocio</i>	1	1.0	1			Marine	Eastern Pacific	–	Tropical	
<i>Salaris fasciatus</i>	Cichlidae	<i>Salaris</i>	21	21.9	8			Freshwater	North and Central America	22 - 30	Tropical	
<i>Salmo marmoratus</i>	Blenniidae	<i>Salmo</i>	8	8.3	3			Marine	Indo-Pacific	–	Tropical	
<i>Scarus guacamaia</i>	Salmonidae	<i>Scarus</i>	1	1.0	1			Freshwater	Europe	–	Subtropical	
<i>Scarus xanthopleura</i>	Scaridae	<i>Scarus</i>	16	16.7	5			Marine	Western Atlantic	–	Subtropical	
<i>Scatophagus argus</i>	Scaridae	<i>Scatophagus</i>	1	1.0	1			Marine	Western Pacific	–	Tropical	
<i>Schistura mahnerti</i>	Scatophagidae	<i>Schistura</i>	1	1.0	1			Freshwater, brackish, marine	Indo-Pacific	–	Tropical	
<i>Sciaenochromis ahli</i>	Nemacheilidae	<i>Sciaenochromis</i>	1	1.0	1			Freshwater	Asia	–	Tropical	
<i>Sebastes</i> spp.	Cichlidae	<i>Sebastes</i>	7	7.3	3			Freshwater	Africa	24 - 26	Tropical	
<i>Selenotoca multifasciata</i>	Sebastidae	<i>Selenotoca</i>	3	3.1	1			Marine, brackish	Atlantic, Indian and Pacific	–	Tropical, subtropical, temperate	
<i>Serranochromis robustus</i>	Scatophagidae	<i>Serranochromis</i>	8	8.3	2			Marine	Indo-West Pacific	20 - 28	Tropical	
<i>Siganus vulpinus</i>	Cichlidae	<i>Siganus</i>	5	5.2	1	F	NA	Freshwater	Africa	24 - 26	Tropical	Marr et al., 2017
<i>Sparus aurata</i>	Siganidae	<i>Sparus</i>	13	13.5	3			Marine	Western Pacific	–	Tropical	
<i>Sperata aor</i>	Sparidae	<i>Sperata</i>	6	6.3	3			Marine	Eastern Atlantic	–	Subtropical	
<i>Steatocranus casuarinus</i>	Bagridae	<i>Steatocranus</i>	4	4.2	2			Freshwater	Asia	–	Tropical	
<i>Sternarchorhynchus</i> spp.	Cichlidae	<i>Sternarchorhynchus</i>	21	21.9	7			Freshwater	Africa	24 - 28	Tropical	
<i>Symphysodon aequifasciatus</i>	Apteronotidae	<i>Symphysodon</i>	2	2.1	2			Freshwater	South America	–	Tropical	
<i>Symphysodon discus</i>	Cichlidae	<i>Symphysodon</i>	20	20.8	7			Freshwater	South America	26 - 30	Tropical	
<i>Symphysodon</i> spp.	Cichlidae	<i>Symphysodon</i>	42	43.8	7			Freshwater	South America	26 - 30	Tropical	
<i>Synanceia horrida</i>	Cichlidae	<i>Synanceia</i>	23	24.0	7			Freshwater	South America	–	Tropical	
<i>Synchiropus picturatus</i>	Synanceiidae	<i>Synchiropus</i>	1	1.0	1			Marine	Indo-West Pacific	–	Tropical	
<i>Syncrossus beauforti</i>	Callionymidae	<i>Syncrossus</i>	5	5.2	2			Marine	Indo-West Pacific	–	Tropical	
<i>Syncrossus</i> spp.	Cobitidae	<i>Syncrossus</i>	3	3.1	2			Freshwater	Asia	24 - 28	Tropical	
<i>Synodontis eupterus</i>	Botiidae	<i>Synodontis</i>	1	1.0	1			Freshwater, brackish	Asia	–	Tropical	
<i>Synodontis nigriventris</i>	Mochokidae	<i>Synodontis</i>	4	4.2	3			Freshwater	Africa	22 - 26	Tropical	
<i>Synodontis</i> spp.	Mochokidae	<i>Synodontis</i>	4	4.2	1			Freshwater	Africa	22 - 26	Tropical	
<i>Tanichthys albonubes</i>	Mochokidae	<i>Tanichthys</i>	1	1.0	1			Freshwater	Africa	–	Tropical	
	Tanichthyidae		39	40.6	8			Freshwater	Asia	18 - 22	Tropical	
Tetraodontidae	Tetraodontidae	<i>Thalassoma</i>	27	28.1	5			Freshwater, brackish, marine	Atlantic, Indian and Pacific	–	Tropical, subtropical	
<i>Thalassoma bifasciatum</i>	Labridae	<i>Thalassoma</i>	6	6.3	2			Marine	Western Atlantic	23 - 26	Tropical	
<i>Thalassoma lutescens</i>	Labridae	<i>Thayeria</i>	3	3.1	2			Marine	Indo-Pacific	24 - 28	Subtropical	
<i>Thayeria boehlkei</i>	Characidae	<i>Thayeria</i>	43	44.8	7			Freshwater	South America	22 - 28	Tropical	
<i>Thayeria obliqua</i>	Characidae	<i>Thorichthys</i>	1	1.0	1			Freshwater	South America	22 - 28	Tropical	
<i>Thorichthys meeki</i>	Cichlidae	<i>Trichogaster</i>	3	3.1	1			Freshwater	Central America	26 - 30	Tropical	
<i>Trichogaster lalius</i>	Osphronemidae	<i>Trichopodus</i>	65	67.7	8			Freshwater	Asia	25 - 28	Tropical	
<i>Trichopodus leerii</i>	Osphronemidae	<i>Trichopodus</i>	26	27.1	7			Freshwater	Asia	24 - 28	Tropical	
<i>Trichopodus pectoralis</i>	Osphronemidae	<i>Trichopodus</i>	1	1.0	1			Freshwater	Asia	23 - 28	Tropical	
<i>Trichopodus</i> spp.	Osphronemidae	<i>Trichopodus</i>	1	1.0	1			Freshwater, brackish	Asia	–	Tropical	
<i>Trichopodus trichopterus</i>	Osphronemidae	<i>Trigonostigma</i>	51	53.1	8			Freshwater	Asia	22 - 28	Tropical	

<i>Trigonostigma espei</i>	Cyprinidae	<i>Trigonostigma</i>	3	3.1	3			Freshwater	Asia	23 - 28	Tropical	
<i>Trigonostigma heteromorpha</i>	Cyprinidae	<i>Trigonostigma</i>	48	50.0	8			Freshwater	Asia	22 - 25	Tropical	
<i>Trigonostigma espei</i>	Cyprinidae	<i>Tropheus</i>	2	2.1	1			Freshwater	Asia	23 - 28	Tropical	
<i>Tropheus duboisi</i>	Cichlidae	<i>Tropheus</i>	6	6.3	2			Freshwater	Africa	24 - 26	Tropical	
<i>Tropheus</i> spp.	Cichlidae	<i>Valenciennea</i>	2	2.1	1			Freshwater	Africa		Tropical	
<i>Valenciennea puellaris</i>	Gobiidae	<i>Valenciennea</i>	17	17.7	3			Marine	Indo-Pacific	22 - 26	Tropical	
<i>Valenciennea sexguttata</i>	Gobiidae	<i>Xenomystus</i>	6	6.3	2			Marine	Indo-Pacific	22 - 28	Tropical	
<i>Xenomystus nigri</i>	Notopteridae	<i>Xiphias</i>	2	2.1	1			Freshwater	Africa	22- 28	Tropical	
<i>Xiphias gladius</i>	Xiphiidae	<i>Xiphophorus</i>	61	63.5	8			Marine	Atlantic, Indian and Pacific	5 - 27	Temperate	
<i>Xiphophorus maculatus</i>	Poeciliidae	<i>Yasuhikotakia</i>	69	71.9	8	B3	DD	Freshwater	North and Central America	18 - 25	Tropical	Knight et al., 2010; Marr et al., 2017; Albornoz-Garzón et al., 2017; Ramos et al., 2020
<i>Yasuhikotakia modesta</i>	Cobitidae	<i>Yasuhikotakia</i>	2	2.1	2			Freshwater	Asia	26 - 30	Tropical	
<i>Yasuhikotakia morleti</i>	Cobitidae	<i>Zebrasoma</i>	5	5.2	2			Freshwater	Asia	26 - 30	Tropical	
<i>Zebrasoma flavescens</i>	Acanthuridae	<i>Zebrasoma</i>	7	7.3	4			Marine	Pacific Ocean	24 - 28	Tropical	
<i>Zebrasoma rostratum</i>	Acanthuridae	<i>Zebrasoma</i>	6	6.3	3			Marine	Eastern Central Pacific	23 - 28	Tropical	
<i>Zebrasoma scopas</i>	Acanthuridae	<i>Zebrasoma</i>	9	9.4	3			Marine	Indo-Pacific	25 - 28	Tropical	
<i>Zebrasoma velifer</i>	Acanthuridae	<i>Zebrasoma</i>	16	16.7	3			Marine	Eastern Indian Ocean	24 - 28	Tropical	
<i>Zebrasoma veliferum</i>	Acanthuridae	<i>Zebrasoma</i>	2	2.1	1			Marine	Eastern Indian Ocean	24 - 28	Tropical	
<i>Zebrasoma xanthurum</i>	Acanthuridae	<i>Zebrasoma</i>	16	16.7	3			Marine	Western Indian Ocean	24 - 28	Tropical	