

Supporting material for
The comparative energetics of the ray-finned fish in an
evolutionary context *

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B.1 List of species and data types

In this Appendix we give the list of species (Table B.1) with the data types (Table B.2) that are used in the analysis and references.

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Table B.1: Ray-finned fish species that are included in the AmP collection at 2022/04/11, the data types as extracted from the literature and selected references. Besides these references, websites for have used to get data, which are presented on the AmP website. The codes of the data types are presented in Table B.3

species	data	references
<u>Erpetoichthys calabaricus</u>	ah, ab, ap, am, Lb, Lp, Li, L-t, Wwp, Wwi, Ri	Babatunde (2011)
<u>Polypterus senegalus</u>	ah-T, am, Lp, Li, Wwb, Wwi, Ri, t-L	Bartsch et al. (1997)
<u>Polyodon spathula</u>	ap, am, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww, L-Ww	Rosen (1976)
<u>Acipenser brevirostrum</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww, T-ab	Hardy and Litvak (2004), Woodland (2005)
<u>Acipenser fulvescens</u>	ab, ap, am, Lp, Li, Wwb, Ri, t-L, L-Ww	Bruch et al. (2006), Haugen (1969)
<u>Acipenser gueldenstaedtii</u>	ah, ab, ap, am, Lb, Lp, Li, Wwh, Wwi, Ri, t-Ww	Chebanov and Galich (2013), Coad (2018), J (1993), Memis et al. (2009), Nazari et al. (2013), Siddique et al. (2014)
<u>Acipenser medirostris</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-Ww	Moser et al. (2016)
<u>Acipenser nudiiventris</u>	ah, ab, ap, am, Lh, Lb, Li, Wwi, Ri, t-Ww	Chebanov and Galich (2013), Coad (2018), fisheries organization (2017), Kottelat and Freyhof (2007), Mousavi and Ghafor (2014), Rochard et al. (1991), Siddique et al. (2014)
<u>Acipenser oxyrinchus</u>	ab, ap, am, Li, Wwb, Wwi, Ri, t-L, t-Ww, L-Ww	Mason et al. (1992), Mims et al. (2002)
<u>Acipenser persicus</u>	ah, ab, ap, am, ah, Lb, Lp, Li, Wwp, Wwi, Ri, t-L	Alavi et al. (2005), Coad (2018), Imani and Falahatkar (2017), Kottelat and Freyhof (2007), Nazari et al. (2013), Siddique et al. (2014), Vecsei and Artyukhin (2001)
<u>Acipenser ruthenus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri	Peterson et al. (2006), Pikitch et al. (2005), Reinartz (2002), Rochard et al. (1991)
<u>Acipenser stellatus</u>	ah, ab, ap, am, Lb, Lp, Li, Wwh, Wwi, Ri, t-Ww	Chebanov and Galich (2013), Coad (2018), Frimodt (1995), Ghasemi et al. (2018), J (1993), Kottelat and Freyhof (2007), Mousavi and Ghafor (2014), Siddique et al. (2014)
<u>Acipenser sturio</u>	ah, ab, aj, ap, am, Lh, Lb, Lj, Lp, Li, Wwi, Ri	Bruch (2008), Dettlaff et al. (1993), Ehrenbaum (1894), Kinzelbach (1987), Williot et al. (2009)
<u>Acipenser transmontanus</u>	ah, ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-dWw	Cherr and Clark (1982), Lee et al. (2017), Parsley and Kofoot (2013)
<u>Huso huso</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Chebanov and Galich (2013), Coad (2018), Falahatkar et al. (2013), J (1993), Kottelat and Freyhof (2007), Motlagh (2001), Siddique et al. (2014)

Continuation of Table B.1		
species	data	references
<u>Huso dauricus</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Birstein et al. (2002), Koshelev et al. (2014)
<u>Scaphirhynchus albus</u>	ab, ap, am, Li, Wwb, Wwi, Ri, LWw, t-L, t-Ww	George et al. (2012), Keenlyne and Jenkins (1993), Keenlyne and Maxwell (1993)
<u>Scaphirhynchus suttkusi</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri	George et al. (2012), Kuhajda and Rider (2016)
<u>Scaphirhynchus platorynchus</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Helms (1974)
<u>Amia calva</u>	ah, ab, ap, am, Lh, Lb, L-t, Lp, Li, Wwi, Ri, t-L, L-Ww	Etnier and Starnes (1993)
<u>Atractosteus spatula</u>	ah, ab, ap, am, Lh, Lb, Li, Wwi, Ri, t-Ww	Clay (2004)
<u>Lepisosteus oculatus</u>	ab, ap, am, Lb, Li, Wwb, Ri, t-L, L-Ww	Love (2004), Wallus et al. (1990)
<u>Lepisosteus osseus</u>	ap, am, Lp, Li, Wwb, Ri, L, t-L, L-Ww	Kelley (2012), Wallus et al. (1990)
<u>Lepisosteus platostomus</u>	ab, ap, am, Lp, Li, Wwb, Wwi, R-Ww, t-L	Sutton et al. (2009), Wallus et al. (1990)
<u>Lepisosteus platyrhincus</u>	ap, am, Lp, Li, Wwb, Wwi, R-L, t-L	Murie et al. (2009), Wallus et al. (1990)
<u>Elops saurus</u>	ab, am, Ls, Lp, Li, Wwb, Wwp, Wwi, Ri, dLb, L-Ww	Levesque (2014), Santos-Martínex and Ardboleda (1993)
<u>Megalops atlanticus</u>	ab, ap, am, Lb, Ls, Lj, L-t, Lp, Li, Wwi, Ri, t-L	Crabtree et al. (1995)
<u>Albula vulpes</u>	ab, as, aj, ap, am, Lb, Ls, Lj, Lp, Li, Wwi, Ri, L-Ww	Bruger (1974)
<u>Notacanthus chemnitzii</u>	aj, ap, am, Lj, Lp, Li, Wwb, Ri, t-L, L-Ww	Vedishcheva et al. (2016)
<u>Anguilla anguilla</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww, L-Ww	Angelidis et al. (2005), Penaz and Tesch (1970), Tesch (2003)
<u>Anguilla japonica</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww	Castellani and Edwards (2017), Guan et al. (1994), H. Tanaka (2001)
<u>Conger conger</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Cunningham (1891), O’Sullivan et al. (2003)
<u>Hiodon tergisus</u>	ap, am, Lb, L-t, Li, Wwi, Ri	
<u>Hiodon alosoides</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L-f, t-Ww-f	Donald and Kooyman (2011), Wallus et al. (1990)
<u>Osteoglossum bicirrhosum</u>	ah, ab, ap, am, Lh, Lb, Li, Wwi, Ri	Yanwirsal (2013)
<u>Notopterus notopterus</u>	ah, ab, ap, am, Lh, Lb, Lp, Li, Ww-L, Ri	Yanwirsal (2013)
<u>Chitala chitala</u>	ah, ab, am, Lb, Lp, Li, Wwb, t-L, L-Ww, Ww-N	Hussain et al. (2015), Sarkar et al. (2006, 2008)
<u>Arapaima gigas</u>	ab, ap, am, Lb, Lp, Li, Wwi, Ri, t-L, L-Ww	Arantes et al. (2010), Queiroz (2000)
<u>Clupea harengus</u>	ab, aj, ap, am, Lb, Lp, Li, Wwi, Ri, t-L, t-Ww-f, L-Ww	Bigelow et al. (1963), Blaxter (1968), G.H. and M. (2004), J. (2002), Koli (1990), Lea (1930), Teal (2003)
<u>Clupea bentincki</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Castillo-Jordán et al. (2010)
<u>Clupea pallasii</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Chernoivanova (2017)

Continuation of Table B.1		
species	data	references
<u>Sprattus sprattus</u>	am, Lb, Lp, Li, Ri, t-L, L-Ww, L-N	Dulcic (1998), Prodanov (1997), Torstensen (1992)
<u>Clupeonella cultriventris</u>	am, Lp, Li, Wwb, Ri, t-L _f , t-Ww _f	Kiyashko et al. (2006)
<u>Alosa aestivalis</u>	ap, am, Lp, Li, Wwb, Ri, t-L, L-Ww	Messieh (1977), Wallus et al. (1990)
<u>Alosa alabamiae</u>	am, Lp, Li, Wwb, t-L, L-Ww, L-N	Ingram (2007)
<u>Alosa alosa</u>	ap, am, Li, Wwb, Wwi, Ri, t-L, t-Ww	de Laak (2009)
<u>Alosa chrysochloris</u>	ap, am, Lh, Lb, Lp, Li, Wwb, Wwi, Ri	Wallus et al. (1990)
<u>Alosa mediocris</u>	ah, am, Lp, Li, Wwb, Wwi, Ri, t-L	Mansueti (1962)
<u>Alosa sapidissima</u>	ah-T, ab, ap, am, Lh, Lb, Lp, Li, Wwi, Ri, t-L	Maltais et al. (2010), Savoy and Crecco (2004)
<u>Alosa saposchnikowii</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww	Malkin and Andrianova (2008)
<u>Alosa pseudoharengus</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Messieh (1977), Wallus et al. (1990)
<u>Brevoortia patronus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Hettler (1984), Warlen (1988)
<u>Sardina pilchardus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww, t-Ww, t-GSI	Dessier (2015), ICES (2012), Nunes et al. (2011), Q. Queiros (2017), Ré and Meneses (2008), Silva et al. (2008, 2006)
<u>Sardinops sagax</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	nonez Velázquez et al. (2000)
<u>Limnothrissa miodon</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, Ww-N	Kimura (1995), Peter (1999)
<u>Stolothrissa tanganicae</u>	am, Li, Wwb, Wwp, Wwi, t-L, Ww-N	Kimura (1995), Peter (1999)
<u>Tenulosa ilisha</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Almukhtar et al. (2016), Amin et al. (2005), Marammazi et al. (2016), Rahman and Cowx (2006)
<u>Amblygaster sirm</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Dayaratne and Gjøsæter (1986)
<u>Dorosoma cepedianum</u>	ab, am, Lp, Li, Wwb, Ri, t-L, t-Ww, L- Ww	Bodola (1964), Wallus et al. (1990)
<u>Dorosoma petenense</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Johnson (1970, 1971)
<u>Ethmalosa fimbriata</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Moses (1988)
<u>Herklotsichthys quadrimaculatus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L _f	Milton et al. (1993), Shirafuji et al. (2007)
<u>Hilsa kelee</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Panhwar et al. (2013)
<u>Opisthonema oglinum</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Vega-Cendejas et al. (1997)
<u>Opisthonema libertate</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Ruiz-Domínguez and Quinonez-Velázquez (2018)
<u>Sardinella aurita</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww, Ww-N	Houria (2015), Tsikliras and Antonopoulou (2006)
<u>Sardinella albella</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Dayaratne and Gjøsæter (1986)
<u>Sardinella gibbosa</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Dayaratne and Gjøsæter (1986)
<u>Sardinella longiceps</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Dayaratne and Gjøsæter (1986)
<u>Engraulis encrasicolus</u>	ab, aj, ap, am, Lb, Lj, Lp, Li, Wdb, Wdj, Wwp, Wwi, Ri, t-L, T-ah	Catalan et al. (2012), Garrido et al. (2012), Pecquerie (2008), Pecquerie et al. (2009), Ré (1996), Regner (1996)

Continuation of Table B.1		
species	data	references
<u>Engraulis anchoita</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-Lf	Carvalho and Castello (2013), Castello and Catello (2003), de Ciechomski (2013)
<u>Engraulis japonicus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Fukuhara (1983), Fukuhara and Takao (1988)
<u>Anchoa mitchilli</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Acosta (2000)
<u>Spratelloides delicatulus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Milton et al. (1991), Shirafuji et al. (2007)
<u>Spratelloides gracilis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-Lf	Milton et al. (1991), Shirafuji et al. (2007)
<u>Spratelloides lewisi</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Milton et al. (1991), Shirafuji et al. (2007)
<u>Chirocentrus dorab</u>	ab, ap, am, Lb, Lp, Li, Wwi, Ri, t-L	Abdussamad et al. (2011), Delsman (1930), Luther (1985), Richards (2008)
<u>Alepocephalus bairdii</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Allain and Lorange (2000)
<u>Bajacalifornia burragei</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Childress et al. (1980)
<u>Chanos chanos</u>	ah, ab, aj, ap, am, Lh, Lb, Lp, Li, Wwp, Wwi, Ri, t-L, t-Ww, L-N, Ww-N	Bagarinao (1991), Sumagaysay and Borlongan (1995)
<u>Enteromius liberiensis</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Payne (1976), Weimans (2007)
<u>Cyprinus carpio</u>	ah, ab, ap, am, Lh, Lb, Lp, Li, Wwb, Wwp, Wwi, GSI, t-Lf, t-Ww, L-Ww, L-N, Ww-N	Crivelli (1981), de Wilt and van Emmerik (2008), Donkers (2011), I. Balk et al. (2006), Karatas and Seze (2005), Njouokou et al. (2013)
<u>Carassius auratus</u>	ab, am, Li, Wwb, Wwp, Wwi, Ri, t-L	Lorenzoni et al. (2007), Ortega-Salas1 and Reyes-Bustamante (2006)
<u>Carassius carassius</u>	ap, am, Lh, Lb, Li, Wwb, Ri, t-L, L-Ww, T-ah	Wijmans (2009)
<u>Carassius gibelio</u>	am, Lp, Li, Wwb, Ri, t-Lf, L-Wwf	Marinović et al. (2016)
<u>Barbus barbus</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, t-L, t-Ww, L-N	Weimans (2007)
<u>Capoeta capoeta</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Türkmen et al. (2002)
<u>Luciobarbus sclateri</u>	ap, am, Lp, Li, Wwb, GSI, t-L, t-Ww	Herrera et al. (1988)
<u>Schizothorax richardsonii</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww	Joshi et al. (2016), Singh and Sharna (1995)
<u>Danio rerio</u>	ab, aj, ap, am, L0, Lb, Lj, Lp, Li, Wd0, Wwi, Ri, GSI, t-Le, t-Wwe, t-Wde, t-JCe, t-JNe, t-LfT, t-Wwf, t-N, t-S, L-Ww	Augustine (2009), Bagatto et al. (2001), Bang et al. (2004), Bayer (2005), Beaudouin et al. (2015), Best et al. (2010), Drew et al. (2008), Forbes et al. (2010), Geffroy and Simon (2013), Gerhard et al. (2002), Lawrence et al. (2008), Schilling (2002), Spence et al. (2008)
<u>Hypophthalmichthys molitrix</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, t-Ww, L-Ww	Beelen (2008), Kamilov (2014), Lenaerts et al. (2015)
<u>Hypophthalmichthys nobilis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Schranka and Guy (2002)

Continuation of Table B.1		
species	data	references
<u>Ctenopharyngodon idella</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Venkatesh and Shetty (1978)
<u>Tinca tinca</u>	ah, ab, ap, am, Lh, Lb, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N, Ww-N	Beelen (2008), Pompei et al. (2012)
<u>Rhodeus amarus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Battes and Stoica (2005), Konecna (2012), Smith and Reichard (2013)
<u>Gobio gobio</u>	ah, ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-Ww	Beers (2005)
<u>Romanogobio albipinnatus</u>	am, Lp, Li, Wwb, Ri, t-Ww.T, T-ab	Wanzenböck and Wanzenböck (1993)
<u>Phoxinus phoxinus</u>	ab.T, aj, ap, am, L0, Lb, Lp, Li, JO_W, Ww0, Wwb, Wwi, Ri, t-L, t-Ww, L-Ww, L-N, Ww-JO	Bengtsson (1974), Frost (1943), Heese (1984), Jenssen et al. (2010), Killen (2014), Kottelat and Freyhof (2007), Mills (1987), Mills and A: (1985), Museth et al. (2002), Muus and Dahlstrøm (1968), Plath et al. (2013), Schönweiger et al. (2000), Stalmans and Kestemont (1991)
<u>Chrosomus erythrogaster</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Settles (1974)
<u>Chrosomus neogaeus</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, dLp	Stasiak (1978)
<u>Chrosomus oreas</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Stasiak (1978), Thompson et al. (2017)
<u>Chrosomus saylori</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	White (2012)
<u>Chrosomus tennesseensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Hamed et al. (2009)
<u>Gila atraria</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Neuhold (1954), Varley and Livesay (1976)
<u>Gila coerulea</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Bird (1975)
<u>Gila cypha</u>	ah, ap, am, Lb, Li, Wwb, Wwi, R.L, t-L, L-Ww	Hamman (1982)
<u>Gila elegans</u>	ab, ap, am, Li, Wwb, Wwi, RL, t-L, t-Ww	
<u>Gila intermedia</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	Kucera (1978)
<u>Gila pandora</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Gila robusta</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Vanicek and Kramer (1969)
<u>Ptychocheilus lucius</u>	ap, am, Li, Wwb, Wwi, t-L, L-Ww, Ww-N	Inslee (1983), Valdez et al. (2002), Vanicek and Kramer (1969)
<u>Ptychocheilus grandis</u>	ap, am, Li, Wwb, Wwi, Ri, t-L	Brown (1990), Inslee (1983)
<u>Ptychocheilus oregonensis</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Beamesderfer (1992), Garcia (2014)
<u>Siphateles bicolor</u>	ah, ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L, L-N, Ww-N	Archdeacon and Bonar (2009), Bird (1975), Kucera (1978)
<u>Acrocheilus alutaceus</u>	ab.T, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Moodie and Lindsey (1972)
<u>Lavinia exilicauda</u>	am, Lp, Li, Wwb, Wwp, Wwi, R.L, t-L	Geary and Moyle (1980)
<u>Alburnoides bipunctatus</u>	ab, ap, am, Li, Wwb, Wwi, Ri, t-L.f, L-Ww	Beekman and van Emmerik (2005)
<u>Alburnoides eichwaldii</u>	ah, ab, ap, am, Lb, Lp, Li, Wwb, Ri, t-L,	Abbasi and Ghorbani (2010), Beekman and van Emmerik (2007)
<u>Kaboudval</u>	t-Ww, L-Ww	

Continuation of Table B.1		
species	data	references
<u>Alburnoides eichwaldii</u>	ah, ab, ap, am, Lb, Lp, Li, Wwb, Ri, t-L,	Abbasi and Ghorbani (2010), Beekman
<u>ShirAbad</u>	t-Ww, L-Ww	and van Emmerik (2007)
<u>Alburnoides eichwaldii</u>	ah, ab, ap, am, Lb, Lp, Li, Wwb, Ri, t-L,	Beekman and van Emmerik (2007),
<u>Tajan</u>	t-Ww, L-Ww	Keivani et al. (2016), ?
<u>Alburnoides eichwaldii</u>	ah, ab, ap, am, Lb, Lp, Li, Wwb, Ri, t-L,	Beekman and van Emmerik (2007), Es-
<u>ZarrinGol</u>	t-Ww, L-Ww	maeilpour Poodeh and H (2010)
<u>Notemigonus crysoleucas</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, t-L	Johannes et al. (1989)
<u>Abramis brama</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri,	van Emmerik (2008), Zhang et al. (2016)
	t-L	
<u>Mirogrex terraesanctae</u>	am, Lp, Li, Wwb, Wwi, Ri, L-L	Ostrovsky and Walline (1999)
<u>Vimba vimba</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Okgerman et al. (2011), Wieser et al.
		(1992)
<u>Chondrostoma nasus</u>	ap, am, Lp, Li, Wwb, Ri, t-L-f, L-Ww, T-	Beekman (2007)
	ab	
<u>Iberochondrostoma</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Velasco et al. (1990)
<u>lemmingii</u>		
<u>Pseudochondrostoma</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L-f	Herrera and Fernández-Delgado (1994)
<u>polylepis</u>		
<u>Rutilus rutilus</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, R.L,	de Laak (2010), Raczynski et al. (2008)
	t-L-f	
<u>Scardinius</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Kennedy and Fitzmaurice (1974), Patimar
<u>erythrophthalmus</u>		et al. (2010)
<u>Squalius cephalus</u>	ah-T, ab-T, ap, am, Lh, Lb, Lp, Li, Wwh,	Calta (2000), H. (2004), Kilic and Becer
	Wwb, Wwi, Ri, t-L, t-Ww, L-Ww, L-N,	(2016), Koc et al. (2007), Kupren et al.
	Ww-N	(2011)
<u>Squalius cii</u>	am, Lp, Li, Wwb, GSI, t-L, L-Ww	Economou et al. (1991), Koc et al. (2007)
<u>Squalius pyrenaicus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Fernández-Delgado and Herrera (1995)
<u>Hemitremia flammea</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Muller (2012), Sossamon (1990)
<u>Meda fulgida</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Barber et al. (1970)
<u>Lepidomeda albivallis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Billman et al. (2011), Scoppettone et al.
		(2004)
<u>Lepidomeda aliciae</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Billman et al. (2011)
<u>Lepidomeda copei</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Johnson et al. (1995)
<u>Semotilus atromaculatus</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Henshell et al. (2006)
<u>Semotilus corporalis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Reed (1971)
<u>Margariscus margarita</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Fava and fa Tsai (1974)
<u>Rhynchocypris</u>	am, Lp, Li, Wwb, Wwi, R.L, t-L	Ling et al. (2015)
<u>oxycephalus</u>		
<u>Iotichthys phlegethontis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Hanks and Belk (2004), Mills et al. (2004)
<u>Mylocheilus caurinus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Cartwright (1959), Moyle et al. (2004),
		Scott (1952)
<u>Pogonichthys</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Moyle et al. (2004)
<u>macrolepidotus</u>		

Continuation of Table B.1		
species	data	references
<u>Richardsonius egregius</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N, L-Ww	Bird (1975), Evens (1969)
<u>Exoglossum maxillingua</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Cowley et al. (2013), Maurakis and Green (2001), Pappantoniou et al. (1964)
<u>Oregonichthys crameri</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Anonymous (1998), Scheerer and McDonald (2003)
<u>Rhinichthys atratulus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f	Fraker et al. (2002), Reed and Moulton (1973)
<u>Rhinichthys cataractae</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f	Fraker et al. (2002), Reed and Moulton (1973)
<u>Campostoma anomalum</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Agosia chrysogaster</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Kepner (1982), Winther (1962)
<u>Blicca bjoerkna</u>	ah, ab, ap, am, Lb, Lp, Li, Wwb, Ri, t-L, t-Ww, L-Ww	Schoone and van Breugel (2006), Yilmaz et al. (2015)
<u>Cyprinella analostana</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Denoncourt and Messersmith (1982)
<u>Cyprinella lutrensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coburn (1986)
<u>Cyprinella trichroistia</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Scott and Mayden (2008)
<u>Cyprinella venusta</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Dionda argentosa</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Gibson and Fries (2005), Robertson et al. (2016)
<u>Dionda diaboli</u>	ah, ab, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	Gibson and Fries (2005), Hulbert et al. (2007)
<u>Hybognathus amarus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L.f, L-N	Caldwell et al. (2019), Cowley et al. (2006)
<u>Hybognathus nuchalis</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L.f, L-N	Ramírez-García and Piller (2018)
<u>Hybognathus placitus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L.f, L-N	Taylor and Miller (1990)
<u>Hybopsis amnis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri	Coburn (1986)
<u>Luxilus chrysocephalus</u>	ap, am, Lp, Li, Wwb, GSI, t-L, t-Ww	Coburn (1986), Simmons and Beckman (2012)
<u>Luxilus cornutus</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, t-L.f, Ww-N	Coburn (1986), Fee (1965)
<u>Luxilus pilsbryi</u>	am, Lp, Li, Wwb, GSI, t-L, t-Ww	Coburn (1986), Simmons and Beckman (2012)
<u>Lythrurus roseipinnis</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Heins and Bresnick (1975)
<u>Lythrurus umbratilis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri	Coburn (1986)
<u>Macrhybopsis gelida</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Dieterman et al. (2006), Starks et al. (2016)
<u>Macrhybopsis hyostoma</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Dieterman et al. (2006), Scopettone et al. (1992), Starks et al. (2016)
<u>Macrhybopsis meeki</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Dieterman et al. (2006), Starks et al. (2016)
<u>Macrhybopsis storeriana</u>	tp, am, Lp, Li, Wwb, Wwp, Wwi, Ri, tL	Dieterman et al. (2006)

Continuation of Table B.1		
species	data	references
<u>Moapa coriacea</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, L-dL, L-N	Hereford (2014), Scoppettone et al. (1992)
<u>Notropis amabilis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coburn (1986)
<u>Notropis atherinoides</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coburn (1986), Fuchs (1967)
<u>Notropis atrocaudalis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coburn (1986)
<u>Notropis bifrenatus</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Harrington (1948)
<u>Notropis blennioides</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coburn (1986)
<u>Notropis boops</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	Lehtinen and Echelle (1979)
<u>Notropis buccula</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Marks (1999)
<u>Notropis buccatus</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww, L-Ww	Hoyt (1971)
<u>Notropis buechanani</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coburn (1986)
<u>Notropis chalybaeus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Perkin et al. (2012)
<u>Notropis chrosomus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f, t-Ww	Holder and Powers (2010)
<u>Notropis girardi</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coburn (1986)
<u>Notropis heterolepis</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Emery and Wallace (1974), Roberts et al. (2006)
<u>Notropis hudsonius</u>	am, Lp, Li, Wwb, t-L, L-Ww, L-N	Coburn (1986), Wells and House (1974)
<u>Notropis jemezianus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Notropis longirostris</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Heins and Clemmer (1976)
<u>Notropis maculatus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Notropis oxyrhynchus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coburn (1986), Marks (1999)
<u>Notropis petersoni</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Davis and Louder (1971)
<u>Notropis potteri</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coburn (1986)
<u>Notropis rafinesquei</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Haag et al. (2007)
<u>Notropis rubellus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Reed (1957)
<u>Notropis sabinae</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L.f, L-N	Heins (1981)
<u>Notropis spectrunculus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Olson and Martin (2016)
<u>Notropis stramineus</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Summerfelt and Minckley (1969)
<u>Notropis texanus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Notropis topeka</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Dahle (2001)
<u>Notropis volucellus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Notropis xaenoccephalus</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Jolly and Powers (2008)
<u>Opsopoeodus emiliae</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Phenacobius mirabilis</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L.T	Bestgen and Compton (2007)
<u>Pimephales notatus</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww, L-Ww	Coburn (1986), Gale (1983), Gill and Weatherley (1984)
<u>Pimephales promelas</u>	ab, ap, am, Lb, Lp, Li, Wd0, Ww0, Wwb, Wwp, Wwi, Ri, t-L, t-Ww, L-Ww, t-N, t-dC, t-WwR	Boehler (2012), Boros et al. (2015), Braunbeck et al. (1998), Grant and Tonn (2002), Panter et al. (2012), Parrott and Balakrishnan (2017), Sohoni et al. (2001), Van Aerle et al. (2004), Wang (1986), Watanabe et al. (2007), Weber et al. (2003)

Continuation of Table B.1		
species	data	references
<u>Pimephales vigilax</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Parker (1964)
<u>Platygobio gracilis</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N.f	Gould (1985), Martyn and Schmulbach (1978)
<u>Pteronotropis welaka</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Johnston and Knight (1999)
<u>Catostomus catostomus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Bailey (1969)
<u>Catostomus columbianus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Dauble (1980)
<u>Catostomus commersonii</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Beamish (1973), Beckman and Hutson (2012)
<u>Catostomus latipinnis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	McAda and Wydoski (1985)
<u>Catostomus macrocheilus</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, dLj	Dauble (1980, 1986)
<u>Catostomus microps</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Moyle and Marciochi (1975)
<u>Catostomus platyrhynchus</u>	am, Lp, Li, Wwb, Wwp, Wwi, R.L, t-L	Hauser (1968)
<u>Catostomus rimiculus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Hauser (1968), Hohler (1981)
<u>Catostomus santaanae</u>	ap, am, Lh, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri	Bailey (1969), Greenfield et al. (1970), Warren and Brooks (2014)
<u>Catostomus tahoensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, t-Ww, L-N	Kennedy et al. (1978)
<u>Catostomus warnerensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, L-dL, L-Ww	Dauble (1980), Scheerer et al. (2011)
<u>Chasmistes brevirostris</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri,	Warren and Burr (2014)
<u>Chasmistes cujus</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Scoppettone (1988), Warren and Burr (2014)
<u>Chasmistes liorus</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Belk (1998), Warren and Burr (2014)
<u>Deltistes luxatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Terwilliger et al. (2010)
<u>Xyrauchen texanus</u>	ap, am, Lh, Lp, Li, Wwb, Wwi, Ri	Bailey (1969)
<u>Erimyzon oblongus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Erimyzon sucetta</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Minytrema melanops</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Grabowski et al. (2012)
<u>Hypentelium etowanum</u>	am, Lp, Li, Wwb, Ri, t-L, t-tWw	O’Kelley and Powers (2007)
<u>Hypentelium nigricans</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Raney and Lachner (1946)
<u>Thoburnia atripinnis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Timmons et al. (1983)
<u>Thoburnia rhothoea</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Raney and Lachner (1946)
<u>Moxostoma anisurum</u>	am, Lp, Li, Wwb, Wwp, Wwi, Wwi, Ri, t-L	Mongeau et al. (1992), Thompson et al. (2015)
<u>Moxostoma carinatum</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Beckman and Hutson (2012)
<u>Moxostoma cervinum</u>	am, Lp, Li, Wwb, Wwp, Wwi, Wwi, Ri, t-L	Thompson et al. (2015)
<u>Moxostoma congestum</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f	Thompson et al. (2015), Zymonas and Propst (2007)
<u>Moxostoma duquesnii</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Reid (2009)
<u>Moxostoma erythrurum</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Keeton (1963), Mitton and Lewis (1989)
<u>Moxostoma hubbsi</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Mongeau et al. (1992), Thompson et al. (2015)

Continuation of Table B.1		
species	data	references
<u>Moxostoma</u>	am, Lp, Li, Wwb, Wwi, Wwi, Ri, t-L, L-	Sule and Skelly (1985)
<u>macrolepidotum</u>	Ww	
<u>Moxostoma poecilurum</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Grabowski et al. (2012)
<u>Moxostoma valenciennesi</u>	am, Lp, Li, Wwb, Wwi, Wwi, Ri, t-L	Mongeau et al. (1992), Thompson et al. (2015)
<u>Cycleptus elongatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	
<u>Cycleptus meridionalis</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L, t-Ww	Peterson et al. (1999)
<u>Carpiodes carpio</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Morris (1965)
<u>Carpiodes cyprinus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Grabowski et al. (2012)
<u>Carpiodes velifer</u>	am, Lp, Li, Wwb, t-L, t-Ww, L-N	Woodward and Wissing (1976)
<u>Ictiobus cyprinellus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Johnson (1959)
<u>Ictiobus bubalus</u>	am, Lp, Li, Wwb, Wwi, t-L, L-Ww, L-N	Jester (1973)
<u>Ictiobus niger</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Cobitis taenia</u>	ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Robotham (1981)
<u>Cobitis paludica</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Oliva-Paterna et al. (2002)
<u>Hydrocynus vittatus</u>	ah, ab, aj, ap, am, Lh, Lb, L.t, Lp, Li, Wwi, Ri	Steyn et al. (1996)
<u>Hoplias malabaricus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-W	Daniel et al. (2019)
<u>Colossoma macropomum</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Costa et al. (2013)
<u>Piaractus brachypomus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Guerreiro et al. (2018)
<u>Prochilodus nigricans</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Guerreiro et al. (2018)
<u>Semaprochilodus taeniurus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Guerreiro et al. (2018)
<u>Semaprochilodus insignis</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Guerreiro et al. (2018)
<u>Leporinus friderici</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Boujard et al. (1991), Gosmann and de Oliveira Nuner (2015)
<u>Astyanax mexicanus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Simon et al. (2017)
<u>Hyphessobrycon pulchripinnis</u>	ab, ap, am, Li, Wwb, Wwi, Ww.L, Ri, t-L	Cole et al. (1999)
<u>Moenkhausia dichrourea</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Cunha et al. (2007)
<u>Brycon moorei</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Baras and Lucas (2005, 2010), Mancera-Rodriguez (2017)
<u>Brycon opalinus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Gomiero et al. (2007)
<u>Brycon amazonicus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Guerreiro et al. (2018)
<u>Salminus brasiliensis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Zuliani et al. (2016)
<u>Electrophorus electricus</u>	ah, ap, am, Lh, Lb, Lp, L.t, Li, Wwp, Wwi, Ri, t-L	Assuncao and Schwassmann (1995), de Santana et al. (2013)
<u>Apteronotus leptorhynchus</u>	ab, am, Lp, Li, Wwb, GSI, t-L, L-Ww	Ilies et al. (2014), Kirschbaum and Schugardt (2002)
<u>Corydoras aeneus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Huysentruyt et al. (2009), ?

Continuation of Table B.1		
species	data	references
<u>Silurus glanis</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Alp et al. (2011)
<u>Clarias gariepinus</u>	ab-T, am, Li, Wwb, Wwp, Wwi, GSI, t-Ww	Legendre et al. (1992)
<u>Clarias gariepinus</u> x	ab-T, am, Li, Wwb, Wwp, Wwi, GSI, t-Ww	Legendre et al. (1992)
<u>Heterobranchus longifilis</u>	Ww	
<u>Heterobranchus longifilis</u>	ab-T, am, Li, Wwb, Wwp, Wwi, GSI, t-Ww	Legendre et al. (1992)
<u>Heterobranchus longifilis</u> x	ab-T, am, Li, Wwb, Wwp, Wwi, GSI, t-Ww	Legendre et al. (1992)
<u>Clarius gariepinus</u>	Ww	
<u>Ariopsis felis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Flinn et al. (2019)
<u>Bagre marinus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Flinn et al. (2019)
<u>Pangasianodon hypophthalmus</u>	ab, ap, am, Lb, Li, Wwb, Wwp, Wwi, Ri, t-Ww	Chowdhury et al. (2020), Legendre et al. (1998), Mukai et al. (2010)
<u>Ictalurus furcatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Ictalurus punctatus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, T-JO, T-dWw.f, Ww-JO, Ww-JO, t-N, L-Ww	Andrews and Matsuda (1975), Andrews and Stickney (1972), Graham et al. (1999), Jearald and B.E. (1971), Moody-Carpentera et al. (2015), Pawioredjo (2004), Raibley and Jahn (1991), Sakaris and Irwin (2008), Tyus and Nikirk (1990)
<u>Pylodictis olivaris</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Grabowski et al. (2004)
<u>Ameiurus melas</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Copp et al. (2016)
<u>Ameiurus natalis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Ameiurus nebulosus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Gash and Bass (1973)
<u>Noturus albater</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, L-N	Mayden et al. (1980)
<u>Noturus baileyi</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Dinkins and Shute (1996)
<u>Noturus eleutherus</u>	am, Lp, Li, Wwb, Wwi, R.L, t-L	Starnes and Starnes (1985)
<u>Noturus exilis</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L, Ww-N	Vives (1987)
<u>Noturus flavipinnis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Dinkins and Shute (1996)
<u>Noturus flavus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Puchala et al. (2018)
<u>Noturus funebris</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Bennett and Kuhajda (2008)
<u>Noturus gyrinus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Noturus hildebrandi</u>	am, Lp, Li, Wwb, t-L, t-Ww, L-N	Baker and Heins (1994), Mayden and Walsh (1984)
<u>Noturus insignis</u>	ab, am, Lp, Li, Wwb, Ri, t-L, L-Ww	Clugston and Cooper (1982)
<u>Noturus lachneri</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Tumilson and Hardage (2014)
<u>Noturus miurus</u>	am, Lp, Li, Wwb, t-L, L-Ww, L-N	Burr and Mayden (1982)
<u>Noturus munitus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Bennett et al. (2010), Starnes and Starnes (1985)

Continuation of Table B.1		
species	data	references
<u>Noturus nocturnus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Noturus phaeus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Chan and Parsons (2000), Simon and Wal-lus (2003)
<u>Noturus stigmosus</u>	am, Lp, Li, Wwb, t-L, L-Ww, L-N	Scheibly (2003)
<u>Lepidogalaxias salamandroides</u>	am, Lp, Li, Wwb, t-L, L-Ww, L-N	Morgan et al. (2000)
<u>Argentina silus</u>	am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Magnussen (2007), Munk and Nielsen (2005)
<u>Pseudobathylagus milleri</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Childress et al. (1980)
<u>Leuroglossus stilbius</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Childress et al. (1980)
<u>Galaxias paucispondylus</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww, L-N	Bonnett (1990, 1992), Boy et al. (2007)
<u>Galaxias prognathus</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Bonnett (1990, 1992), Boy et al. (2007)
<u>Galaxias maculatus</u>	am, Lb, Lp, Li, Wwb, Ri, t-L.f, L-Ww	Barriga et al. (2012), Bonnett (1990), Boy et al. (2007)
<u>Coregonus albula</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Kozowski et al. (2010)
<u>Coregonus artedi</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Stockwell et al. (2009)
<u>Coregonus autumnalis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.T, t-Ww.T	Fechhelm et al. (1993)
<u>Coregonus clupeaformis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Oosten and Hile (1949)
<u>Coregonus hoyi</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Schaeffer (2004)
<u>Coregonus kiyi</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Deason and Hile (1947)
<u>Coregonus laurettae</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Alt (1973)
<u>Coregonus lavaretus</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L, L-Ww	Szczepkowski et al. (2010), Tolonen (1997)
<u>Coregonus nasus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Griffiths et al. (1992)
<u>Coregonus pidschian</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Bochkarev et al. (2018)
<u>Coregonus reighardi</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Jobes (1943)
<u>Coregonus sardinella</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Muir et al. (2014)
<u>Coregonus zenithicus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Muir et al. (2014)
<u>Prosopium abyssicola</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N, L-Ww	Shestakov (2017), Thompson (2003)
<u>Prosopium coulterii</u>	ap, am, Li, Wwb, Wwi, Ri, t-L	Stewart et al. (2016)
<u>Prosopium cylindraceum</u>	am, Lp, Li, Wwb, t-L, t-Ww, L-N	Shestakov (2017)
<u>Prosopium gemmifer</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f	Frantz and Cordone (1965), Shestakov (2017)
<u>Prosopium spilonotus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N, L-Ww	Shestakov (2017), Thompson (2003)
<u>Prosopium williamsoni</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Benjamin et al. (2014), Shestakov (2017)
<u>Stenodus leucichthys</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Alt (1973)
<u>Thymallus arcticus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Craig and Poulin (1975)
<u>Thymallus thymallus</u>	ah.T, ap, am, Lh, Lp, Li, R.L, GSI, t-L.f, t-Ww, L-Ww, T-ah	Hellawell (1969), Ingram et al. (20aa), Jungwirth and Winkler (1984), Laak (2008)

Continuation of Table B.1		
species	data	references
<u>Thymallus tugarinae</u>	am, Lp, Li, Wwb, t-L _f , t-Ww _f , L-N	Mikheeva et al. (2012, 2013)
<u>Oncorhynchus clarkii stomias</u>	ah, ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L _T , t-Ww _T	Cartwright et al. (1998), Coleman and Fausch (2007), Scarnecchia and Bergersen (1986), Young (2009)
<u>Oncorhynchus gilae</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, L-dL	Rinne (1982)
<u>Oncorhynchus gorboscha</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L	LeBrasseur and Parker (1964)
<u>Oncorhynchus keta</u>	ab, am, Lb, Lp, Li, Wwb, Wwi, t-dL, L-N	Beacham (1982), Urbach et al. (2012)
<u>Oncorhynchus kisutch</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ni, t-L	Beacham et al. (1985), Raymond (1986)
<u>Oncorhynchus mykiss</u>	ah _T , ab _T , ap, am, Lp, Li, Wd0, Wdh, Wdb, Wwp, Wwi, Ri, t-Ww _f , t-L _f , t-Wde, t-WdYe, T-ah, Ww-JO	Davidson et al. (2014), From and Rasmussen (1991), Kieffer et al. (1998), Lauff and Wood (1996), Ninness et al. (2006), Sumpter et al. (1991), Tyler et al. (1996), Velsen (1987), Weatherley and Gill (1981), Wieser (1985), Yanik et al. (2002)
<u>Oncorhynchus nerka</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ni, t-Ww	Beacham et al. (1985)
<u>Oncorhynchus tshawytscha</u>	ab, ap, am, Lb, Lp, Li, Wd0, Wwb, Wwp, Wwi, Ni, E0, t-Le _T , L-Wde _T , T-ab, t-L _{fT} , t-Ww _{fT} , L-Ww, L-N	Allen and Hassler. (1985), Beacham and Murray (1990), Beacham and Murray. (1993), Berg et al. (2001a), Einum et al. (2003), Heming (1982), Jasper and Even-son (2006), Orsi and Jaenicke (1996), Shel-bourn et al. (1995), Zabel and Achord (2004)
<u>Salmo trutta</u>	ab _T , ap, am, Lh, Lb, Lp, Li, Ri, L-Ww, T-ah	Elliot (1975, 1984, 1994), Klemetsen et al. (2003), Ojanguren and Brana (2003)
<u>Salmo salar</u>	ab, aj, ap, am, Lb, Lj, Li, Wwb, Wwj, Ri, L-Ww, t-L	Berg et al. (2001b), Einum and Fleming (2000), Fleming (1996), Flower (1935), Hutchings and Jones (1998), Jutila et al. (2006), Thorpe et al. (1984a,b), Van Leeuwen et al. (2016)
<u>Salvelinus alpinus</u>	ah, ab, ap, am, Lb, Lp, Li, Wwh, Wwi, Ri, t-Ww	Gruber and Wieser (1983), Yanik et al. (2002)
<u>Salvelinus curilus</u>	am, Lp, Li, Wwb, Ri, t-L _f , L-Ww	Kolpakov et al. (2014)
<u>Salvelinus fontinalis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Öhlund et al. (2008)
<u>Salvelinus leucomaenis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Morita (2001)
<u>Salvelinus malma</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww	Esin (2015)
<u>Salvelinus namaycush</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L _f	Morbey et al. (2010)
<u>Salvelinus willoughbii</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Frost and Kipling (1980)
<u>Esox americanus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Esox lucius</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Anderson and Neumann (1996), Bregazzi and Kennedy (1980), Žiliukien and Žiliukas (2010)

Continuation of Table B.1		
species	data	references
<u>Esox masquinongy</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Crane et al. (2020), Wallus et al. (1990)
<u>Esox niger</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Crane et al. (2020), Wallus et al. (1990)
<u>Dallia pectoralis</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww, Ww-Ww_R	Blackett (1962)
<u>Umbra limi</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L_f, t-Ww_f, L-Ww	Robinson et al. (2010), Wallus et al. (1990)
<u>Umbra pygmaea</u>	ap, am, Lp, Li, Wwb, Wwi, t-L, L-N	Panek and Weis (2012)
<u>Umbra krameri</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Kováč (1995)
<u>Osmerus mordax</u>	ab, ap, am, Lb, Lp, Li, Wwb, Ri, t-L, L-Ww, T-ab	Jones and McCarthy (2013), Maitland and Lyle (2010), Quigley et al. (2004)
<u>Osmerus eperlanus</u>	ab, am, Lp, Li, Wwb, Ri, t-L, t-Ww	Korlyakov and Mukhachev (2009), Quigley et al. (2004)
<u>Mallotus villosus</u>	ab, ap, am, Lb, Lp, Li, Ri, L-Ww, L-N, Ww-N	Jóhannsdóttir and Vilhjálmsson (1999)
<u>Hypomesus nipponensis</u>	am, Lb, Lp, Li, Wwb, Ri, t-L_Tf	Kudo and Mizuguchi (2000)
<u>Spirinchus thaleichthys</u>	am, Lb, Lp, Li, Wwb, Wwp, Wwi, t-L_f, t-Ww_f, L-N	Chigbu and Sibly (1994)
<u>Thaleichthys pacificus</u>	am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Chigbu and Sibly (1994), Clarke et al. (2007)
<u>Retropinna semoni</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Milton and Arthington (1985)
<u>Maurolicus muelleri</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, t-Ww, Ww-N	Goodson et al. (1995), Munk and Nielsen (2005)
<u>Maurolicus imperatorius</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L	Savinykh and Baytalyuk (2010)
<u>Vinciguerria nimbaria</u>	ap, am, Lp, Li, Wwb, Wwi, t-L, L-N	Javier Tomás (2000), Stequert et al. (2003)
<u>Borostomias panamensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Childress et al. (1980)
<u>Harpadon nehereus</u>	am, Lp, Li, Wwb, Wwi, Ri, L-dL	Firdaus et al. (2017), Ghosh (2014)
<u>Saurida undosquamis</u>	am, Lp, Li, Wwb, Wwi, R_W, t-L	El-Halfawy et al. (2007), Kadharsha et al. (2013), Yoneda et al. (2002)
<u>Bathypterois dubius</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	Morales-Nine et al. (1996), Porcu et al. (2010)
<u>Chlorophthalmus agassizi</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	Anastasopoulou and Papaconstantinou (2006), Cabiddu et al. (2010)
<u>Benthoosema suborbitale</u>	aj, am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Gartner (1991, 1993)
<u>Benthoosema pterotum</u>	ab, am, Lp, Li, Wwb, Ri, t-L, L-Ww	Gjøsæter and Tilseth (1988), Hosseini-Shekarabi et al. (2015)
<u>Benthoosema glaciale</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Gjøsæter (1973)
<u>Electrona antarctica</u>	aj, am, Lp, Li, Wwb, Wwi, Ri, t-L	Greely et al. (1999)
<u>Myctophum asperum</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Hayashi et al. (2001)
<u>Symbolophorus californiensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Takagi et al. (2006)
<u>Tarletonbeania crenularis</u>	am, Lj, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Bystydzieńska et al. (2010)

Continuation of Table B.1		
species	data	references
<u>Ceratoscopelus warmingii</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Takagi et al. (2006)
<u>Diaphus dumerilii</u>	aj, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Gartner (1991, 1993)
<u>Diaphus theta</u>	aj, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Moku et al. (2001)
<u>Nannobranchium ritteri</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Childress et al. (1980)
<u>Nannobranchium regale</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Childress et al. (1980)
<u>Stenobranchius leucopsarus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Childress et al. (1980)
<u>Triphoturus mexicanus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Childress et al. (1980)
<u>Lampanyctodes hectoris</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Prosch (1991), Robertson (1977), Young et al. (1988)
<u>Notoscopelus resplendens</u>	ap, am, Li, Wwb, Ri, t-Ww, L-Ww	Sarmiento-Lezcano et al. (2018)
<u>Notoscopelus elongatus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Gjøsæter (1981)
<u>Lepidophanes guentheri</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Gartner (1991, 1993)
<u>Lampris guttatus</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Cole (2010), Francis et al. (2004)
<u>Percopsis omiscomaycus</u>	ah, ab, ap, am, Lh, Lp, Li, L-W, Wwb, Wwp, Wwi, R-L, t-L-f	House and Wells (1973), Spafford (1999), ?
<u>Percopsis transmontana</u>	ap, am, Lp, Li, Wwb, Wwi, R-L, t-L	Gray and Dauble (1979)
<u>Chologaster cornuta</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Poulson (1963)
<u>Forbesichthys agassizii</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Poulson (1963)
<u>Typhlichthys subterraneus</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Poulson (1963)
<u>Amblyopsis spelaea</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Poulson (1963)
<u>Amblyopsis rosae</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Poulson (1963), White and Culver (2012)
<u>Aphredoderus sayanus</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	McCallum (2012), Shepherd and Huish (1978)
<u>Zeus faber</u>	ah, ap, am, Lh, Lp, Li, Wwi, GSI, t-L, L-Ww	Ismen et al. (2013)
<u>Boreogadus saida</u>	ab, aj, ap, am, L0, Lj, Lp, Li, Ww0, Wwj, Wwp, Wwi, Ni, t-L-T, t-Le, t-Ww-T, t-Wwe, t-JX-T, L-JO-T, L-Ww, L-N, L0-Lt, Ww0-Wwt, L-X, T-JO	Bouchard et al. (2016), Craig et al. (1982), Dahlke et al. (2017), Fey and Węśławski (2017), Hop et al. (1997), Kent et al. (2016), Kunz et al. (2016), Nahrgang et al. (2014), Walkusz et al. (2011)
<u>Eleginus gracilis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Datsky (2016)
<u>Gadiculus argenteus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Magnussen (2007), Munk and Nielsen (2005)

Continuation of Table B.1		
species	data	references
<u>Gadus morhua</u>	ah, ab, aj, ap, am, Lh, Lj, Lp, Li, Wwh, Wwj, Wwi, Ri, GSI, E0, t-L-T, t-Wd-T, t-Ww-f, L-Ww, t-p+, t-JOe, t-JNe, t-VY, t-E, t-Wwe, t-Wde, T-ab, L-N	Björnsson et al. (2007), Buslov et al. (2010), Finn et al. (1995a,b), Kjesbu et al. (1991, 1998), McCollum et al. (2006), Otterlei et al. (1999), Paulsen et al. (2009), Thorsen et al. (2010)
<u>Gadus chalcogrammus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, R.L, t-L	Lai and Gunderson (1987)
<u>Microgadus tomcod</u>	am, Lp, Li, Wwb, t-L, t-Ww, L-N	Couillard et al. (2011), Schaner and Sherman (1960)
<u>Micromesistius poutassou</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Magnussen (2007)
<u>Micromesistius australis</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Contreras-Reyes et al. (2014)
<u>Melanogrammus aeglefinus</u>	ab-T, ap, am, Lp, Li, Wwb, Ww-L, Wwp, Wwi, Ri, t-L-f	Bolle et al. (2004)
<u>Merlangius merlangus</u>	ab, aj, ap, am, Lb, Lj, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-N, L-Ww	Hislop and Hall (1974), Jones and Hislop (1972), Last (1978), Pova et al. (2011), Shaw et al. (2008)
<u>Pollachius virens</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, R.L, t-L-f	Bolle et al. (2004)
<u>Trisopterus luscus</u>	ah, ab, am, Lh, Lp, Li, L-N, L-Ww	Alonso-fernandez et al. (2010), Metin et al. (2008)
<u>Trisopterus minutus</u>	am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Magnussen (2007), Munk and Nielsen (2005)
<u>Merluccius merluccius</u>	ab, aj, ap, am, Lp, Li, Wwb, Wwi, R.L, t-L, L-Ww	Pineiro and Sainza (2003)
<u>Merluccius hubbsi</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Betti et al. (2014), dos Santos and Rossi-Wongtschowski (2007), Rodrigues et al. (2018)
<u>Merluccius polli</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Rey et al. (2016)
<u>Merluccius senegalensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Rey et al. (2016)
<u>Merluccius capensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Wilhelm et al. (2017)
<u>Macruronus novaezelandiae</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Sweetman et al. (2018)
<u>Coryphaenoides rupestris</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Allain and Lorange (2000)
<u>Coryphaenoides acrolepis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Andrews (1997)
<u>Coelorinchus caelorhincus</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Labropoulou and Papaconstantinou (2000)
<u>Nezumia sclerorhynchus</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Labropoulou and Papaconstantinou (2000)
<u>Hymenocephalus italicus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	D’Onchia et al. (2000)
<u>Macrourus berglax</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww	Murua (2003), Orlova et al. (2018)
<u>Macrourus carinatus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Lee et al. (2019)
<u>Trachyrincus scabrus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Sion et al. (2012)
<u>Raniceps raninus</u>	am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Deniel (1985), Munk and Nielsen (2005)

Continuation of Table B.1		
species	data	references
<u>Phycis phycis</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L-f	Matić-Skoko et al. (2011), Vieira et al. (2014)
<u>Phycis blennoides</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L-f	Casas and Pineiro (2000)
<u>Brosme brosme</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Magnussen (2007)
<u>Ciliata mustela</u>	ab, ap, am, Lp, Li, Ri, L-Ww, t-L	Badsha and Sainsbury (1978), Cohen et al. (1990), Smietana, P (1992)
<u>Gaidropsarus guttatus</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Morato et al. (2003)
<u>Lota lota</u>	ah, ab, ap, am, Lh, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Kupren et al. (2014), Smederevac-Lalić et al. (2015)
<u>Molva molva</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Magnussen (2007), Munk and Nielsen (2005)
<u>Molva dypterygia</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Magnussen (2007), Munk and Nielsen (2005)
<u>Pseudophycis bachus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L-f	Kemp et al. (2013)
<u>Antimora rostrata</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Orlova et al. (2018)
<u>Polymixia nobilis</u>	am, Lp, Li, Wwb, GSI, t-L, L-Ww	García-Mederos et al. (2010)
<u>Hoplostethus atlanticus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Allain and Lorange (2000)
<u>Beryx splendens</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L-f	Leis and Carson-Ewart (2000), Rico et al. (2001)
<u>Poromitra crassiceps</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Childress et al. (1980)
<u>Holocentrus adscensionis</u>	ab, am, Lb, Lp, Li, Wwi, Ri, rB	Shinozaki-Mends et al. (2007)
<u>Carapus bermudensis</u>	ab, am, Lb, Lp, Li, Wwi, Ri, t-L	Glynn et al. (2008), Smith et al. (1981)
<u>Genypterus blacodes</u>	am, Lb, Lp, Li, Ww-L, Wwi, t-L, L-N, Ww-N	Baker et al. (2014), Crechriou et al. (2015), Paredes and Bravo (2005), Wiff et al. (2007)
<u>Opsanus tau</u>	ah, ap, am, Lb, Lp, Li, Wwi, R-L, t-L-T, t-Ww-T, L-Ww	Dovel (1960), Mensinger et al. (2001), Palazón-Fernaández et al. (2001), Swartz and Engel (1968)
<u>Opsanus beta</u>	am, Lp, Li, Wwb, Ri, t-L-T, L-Ww	Malca et al. (2009)
<u>Halobatrachus didactylus</u>	ab, ap, am, Lb, Lp, Li, L-Ww, L-N, Ww-N	Palazón-Fernaández et al. (2001)
<u>Kurtus gulliveri</u>	am, Lb, Lj, Lp, Li, Wwb, Wwi, Ri, t-L	BERRA and ADAY (2004), BERRA and Neira (2003)
<u>Ostorhinchus doederleini</u>	ab, aj, ap, am, Lj, Lp, Li, Wwb, Wwj, Wwp, Wwi, Ri, t-L	Kingsford et al. (2014)
<u>Siphamia tubifer</u>	aj, ap, am, Lj, Lp, Li, Wwb, t-L, L-Ww, L-N	Gould et al. (2016)
<u>Perccottus glenii</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Joanna et al. (2011)
<u>Dormitator latifrons</u>	am, Lp, Li, Wwb, Wwi, dWw, GSI, t-L	Basto-Rosales et al. (2019), Chang and Navas (1984)
<u>Gobiomorus dormitor</u>	am, Lp, Li, Wwb, Wwi, GSI, L-dL, L-Ww	Bacheler (2002), Bacheler et al. (2004)
<u>Boleophthalmus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Atsushi Nanamia (2005), Takegaki (2008), Wanshu and Qiyong (2004)
<u>pectinirostris</u>		

Continuation of Table B.1		
species	data	references
<u>Gymnogobius urotaenia</u>	ab, am, Lp, Li, Wwb, t-L, t-Ww, LN	Kolpakov and Deminab (2011)
<u>Tridentiger bifasciatus</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Qin et al. (2020), Slater (2005)
<u>Pomatoschistus minutus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww.f, L-N, T-JO.f, T-ab	Bouchereau et al. (1990, 1989), Fonds (1973), Freitas (2010), Gaas (1977), Penning de Vries (1969)
<u>Rhinogobius brunneus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Heimowitz and Fuller (2007), Kondo et al. (2013)
<u>Gobius niger</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Silva and Gordo (1997)
<u>Gobius paganellus</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Azevedo and Simas (2000)
<u>Gobiosoma bosc</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Ponticola iranicus</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Mohammadi-Darestani et al. (2016)
<u>Neogobius melanostomus</u>	am, Lp, Li, Wwb, Wwp, Ri, t-L, t-Ww	Shemonaev and Kirilenko (2009)
<u>Knipowitschia caucasica</u>	am, Lp, Li, Wwb, t-L, L-Ww, L-N	Güçü and Ömer Erdoğan (2017), Kevrekidis et al. (1990)
<u>Hippocampus whitei</u>	ab, ap, am, Lb, Li, Wwb, Wwi, Ri, t-L	Pitargue (2007), Vincent and Giles (2003), Wong and Benzie (2003)
<u>Hippocampus kuda</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Choo and Liew (2006), Saavedra et al. (2014)
<u>Hippocampus guttulatus</u>	ab, tp, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, L-L, t-Ww	Curtis and Vincent (2006), Planas et al. (2010)
<u>Phyllopteryx taeniolatus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f	Forsgren and Lowe (2006), Sanchez-Camara et al. (2005)
<u>Macroramphosus scolopax</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Borges (2000)
<u>Macroramphosus gracilis</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Borges (2000)
<u>Upeneus moluccensis</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Kaya et al. (1999)
<u>Upeneus tragula</u>	am, Lp, Li, Wwb, Ww-L, Ri, t-L	Pavlov et al. (2015)
<u>Parupeneus multifasciatus</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Pavlov et al. (2013)
<u>Thunnus orientalis</u>	ap, am, Lb, Lp, Li, t-L, L-Ww, L-N, T-ab	Jusup et al. (2011)
<u>Thunnus thynnus</u>	ap, am, Lb, Lp, Li, t-Le, t-L.f, t-Ww, L-Ww, t-N, T-ab	Aguado-Gimenez and Garcia-Garcia (2005), Jusup et al. (2011), Miyashita et al. (2001, 2000), Nisbet et al. (2012)
<u>Thunnus maccoyii</u>	am, Lp, Li, Wwb, Wwi, t-L	Gunna et al. (2008)
<u>Thunnus obesus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	da Silva et al. (2015)
<u>Thunnus albacares</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Eveson et al. (2015)
<u>Thunnus alalunga</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	de Zárate and Babcock (2016)
<u>Katsuwonus pelamis</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Eveson et al. (2015)
<u>Scomber scombrus</u>	ah, ab, ap, am, Lh, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.T, t-Ww, Ww-N, L-Ww, L-Wd, T-ah	Damme (2007), Lockwood (1988), Mendiola et al. (2007, 2006)
<u>Scomber japonicus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Takahashi et al. (2005)

Continuation of Table B.1		
species	data	references
<u>Scomberomorus commerson</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, t-L-T, L-N	McIlwain et al. (2005), Noegroho et al. (2018)
<u>Scomberomorus plurilineatus</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Chale-Matsau et al. (1999)
<u>Scomberomorus sierra</u>	ap, am, Lp, Li, Wwb, GSI, t-L, L-Ww	Chale-Matsau et al. (1999), Lucano-Ramírez et al. (2011), Nava-Ortega et al. (2012)
<u>Trichiurus nanhaiensis</u>	ab, am, Lp, Li, Wwb, Wwi, GSI, t-L	Kwok and Ni (1999, 2000)
<u>Trichiurus lepturus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Narasimham (1976)
<u>Trichiurus lepturus japonicus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, GSI, t-L, t-Ww, L-Ww, Ww-N	Chai et al. (2015), Hong (1980), Kwok and Ni (1999), Li (1983), Luo et al. (1983), Shi et al. (2020), Wan and Meng (2003), Wu et al. (1985)
<u>Aphanopus carbo</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Morales-Nin and Sena-Carvalho (1996)
<u>Brama brama</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Lobo and Erzini (2001), Richards (2003)
<u>Pomatomus saltatrix</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Robillard et al. (2009)
<u>Promethichthys prometheus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Lorenzo and Pajuelo (1995), Robillard et al. (2009)
<u>Mastacembelus erythrotaenia</u>	ah, ab, ap, am, Lh, Lp, Li, Wwi, Ri	
<u>Monopterus albus</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Susatyo et al. (2018), Yang and Xiong (2010)
<u>Channa argus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, Ww-JX_T, Ww-r_T	Liu et al. (1998), Resh et al. (2018)
<u>Channa marulius</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww, L-Ww	Dua and Kumar (2006), Kilambi (1986)
<u>Channa punctata</u>	ab, ap, am, Lb, Lp, Li, L-t, Wwb, Wwp, Wwi, Ri	Saika et al. (2013)
<u>Channa striata</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Kilambi (1986)
<u>Leptomelanosoma indicum</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Kadwade (1971), Kam and Leung (2002)
<u>Filimanus heptadactyla</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Prasad et al. (2005)
<u>Eleutheronema tetradactylum</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Ballagh et al. (2012)
<u>Polydactylus macrochir</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L-f, L-Ww	Moore et al. (2012)
<u>Coryphaena hippurus</u>	ab, aj, ap, am, Lb, L-t, Lj, Lp, Li, Wwi, Ri, t-L, L-Ww	Furukawa et al. (2012)
<u>Trachurus trachurus</u>	ah, ab, ap, am, Lh, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww, T-ah	Abaunza et al. (2003), King et al. (1977), Pipe and Walker (1987)
<u>Trachurus mediterraneus</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww, T-ah	Karlou-Riga (2000)
<u>Seriola dumerili</u>	ah, ab, ap, am, Lh, Lb, Lp, Li, Wwi, GSI, t-L	Papandroulakis (2013), Papandroulakis et al. (2005b)
<u>Echeneis naucrates</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Bachman et al. (2018)

Continuation of Table B.1		
species	data	references
<u>Sphyræna barracuda</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L, L-Ww	Kadison et al. (2010)
<u>Xiphias gladius</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L-f, L-Ww	S.-P. Wang and Chiang (2010), S.-P. Wang and Yeh (2003)
<u>Makaira nigricans</u>	ab, ap, am, Lb, Lp, Li, Wwi, R.L, t-L, L-Ww	Martins et al. (2007), Sponaugle et al. (2005), Sun et al. (2013)
<u>Istiompax indica</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Sun et al. (2015a,b)
<u>Istiophorus platypterus</u>	am, Lj, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Hoolihan (2006)
<u>Centropomus undecimalis</u>	ab, am, Lh, Lb, Lp, Li, Wwb, Wwi, Ri, t-L-f	Perera-Garcia et al. (2013)
<u>Trinectes maculatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Solea senegalensis</u>	ah, ab, aj, ap, am, L0, Lh, Lb, Lj, Lp, Li, Wd0, Wdh, Wdb, Wdj, Wwp, Wwi, Ri, E0, T-ah, T-aj, t-L-T, t-Wd-f, t-Ww, L-Ww, L-Wd	Canavate and Fernandez-Diaz (1999), Carballo et al. (2018), Dinis et al. (1999), Maulvault et al. (2019), Ortiz-Delgado et al. (2019), Parra and Yufera (2001), Ribeiro et al. (2017, 1999), Teixeira and Cabral (2010), Vinagre (2007), Yufera et al. (1999)
<u>Solea solea</u>	ah, ab, aj, ap-T, am, Lh, Lb, Lj, Lp, Li, Wd0, Wdh, Wdb, Wdj, Wwp, Wwi, Ri-L, E0, pAi, T-ah, T-ab, T-aj, t-L-T, t-Wd, L-Ww, L-N, L-JX-T	Day et al. (1996), Deniel (1981,?), Devauchelle et al. (1987), Dorel (1986), Fonds (1979), Fonds et al. (1989), Fonds and Sak-sena (1977), Galois et al. (1990), Lund et al. (2008), Wheeler (1978), Witthames and Greer Walker (1995), ?, ?, ?, ?
<u>Dicologlossa cuneata</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-W	Boufersaoui and Saidani (2015), Boufersaoui and Zeroual (2018), Marinaro et al. (2007), Ouabadi (2015)
<u>Microchirus azevia</u>	ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-W	Boufersaoui and Zeroual (2018), Marinaro (1991)
<u>Microchirus variegatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Deniel (1990), Gibson and Ezzi (1980)
<u>Pegusa lascaris</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Ahlstrom et al. (1984), Boufersaoui et al. (2021), Deniel (1990), Marinaro (1991)
<u>Pegusa impar</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Deniel (1990)
<u>Buglossidium luteum</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Castellani and Edwards (2017), Deniel (1990)
<u>Lepidorhombus whiffiagonis</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L-f	Landa et al. (1996)
<u>Lepidorhombus boscii</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L-f	Landa et al. (2002), Santos (1995)
<u>Scophthalmus maximus</u>	ah, ab, aj, ap, am, Lb, Lj, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L-f, L-Ww, Ww-N	Jomes (1974), Jones (1972, 1973), van der Hammen (2011)
<u>Bothus podas</u>	ab, ap, am, Lj, Lp, Li, Wwb, Wwi, GSI, t-L	Morato et al. (2007)

Continuation of Table B.1		
species	data	references
<u>Arnoglossus laterna</u>	ab, am, Lj, Lp, Li, Wwb, Ri, t-L, t-Ww, L-Ww	Castellani and Edwards (2017), Gibson and Ezzi (1980), Ticina and Matic-Skoko (2012)
<u>Arnoglossus thori</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Deniel (1990)
<u>Paralichthys californicus</u>	aj, ap, am, Lb, Lj, Lp, Li, Wwb, Wwi, Ri, t-L-f	MacNair et al. (2001)
<u>Paralichthys lethostigma</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Syacium gunteri</u>	am, Lb, Lp, Li, Wwi, Ri, t-L	Sánchez-Iturbe et al. (2006)
<u>Hippoglossus hippoglossus</u>	ah, ab, ap, am, Lh, Lb, Lj, Lp, Li, Wwb, Wwi, R-L, t-L, t-Ww	Andriyashev (1964), Blaxter et al. (1983), Haug and Gulliksen (1988), Jakupsstovu and Haug (1988), Lein et al. (1997), Lønning et al. (1982), Munk and Nielsen (2005), Wienerroither et al. (2011)
<u>Hippoglossus stenolepis</u>	ab, aj, ap, am, Li, Wwb, Wwi, Ri, t-L, t-Ww	McFarlane et al. (1991), Orlov et al. (2011)
<u>Reinhardtius hippoglossoides</u>	am, Lb, Lj, Lp, Li, Wwb, Wwi, Ri, t-L	Dwyer et al. (2016)
<u>Hippoglossoides elassodon</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Forrester (1964), Stark (2004)
<u>Glyptocephalus cynoglossus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, R-L, t-L	Bagenal (1963), Magnussen (2007)
<u>Microstomus kitt</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Magnussen (2007)
<u>Hypsopsetta guttulata</u>	ap, am, Li, Wwb, Wwi, Ri, t-L, t-Ww	
<u>Lepidopsetta polyxystra</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Forrester (1964), Stark and Somerton (2002)
<u>Lepidopsetta bilineata</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Forrester (1964), Stark and Somerton (2002)
<u>Pleuronectes platessa</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, R-L, t-L, t-N, L-Ww, L-N, Ww-N, Ww-pX-T, Ww-JO-T, T-ah, T-dL	Bolle et al. (2009), Deniel (1981), Fonds et al. (1992), Glazenburg (1983), Kennedy et al. (2007), Rijnsdorp and Ibelings (1989), Skjærven et al. (2003), Wheeler (1978)
<u>Limanda limanda</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Magnussen (2007)
<u>Limanda ferruginea</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Dwyer et al. (2003)
<u>Platichthys stellatus</u>	ah-T, ab, ap, am, Lh, Lb, Lj, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	
<u>Liopsetta pinnifasciata</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww, L-Ww	Vdovin et al. (2017)
<u>Eopsetta jordani</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Alderdice and Forrester (1971), Krüger (1969)
<u>Ambassis agassizii</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Milton and Arthington (1985)
<u>Amatitlania nigrofasciata</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, Ww-N	Ishikawa and Tachihara (2010)
<u>Amphilophus citrinellus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-Ww	Oldfield (2009)

Continuation of Table B.1		
species	data	references
<u>Coptodon rendalli</u>	ah, ab, ap, am, Lh, Lb, Lp, Li, Ww0, Wwi, Ri, L-Ww, t-L, Ww-N, T-JO, T-JX, t-dWw-T	Caulton (1977, 1982), Chandrasoma and De Silva (1981), Hlophe (2011), Kangombe (2004), Morioka and Matsumoto (2007), Philippart and Ruwet (1982), Weyl and Hecht (1998)
<u>Coptodon zillii</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-Ww	Dikel et al. (2002)
<u>Mayaheros beani</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-Ww	García-Lizárraga et al. (2011), Martinez-Cardenas et al. (2014)
<u>Mayaheros urophthalmus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Faunce et al. (2002)
<u>Oreochromis aureus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Oreochromis mossambicus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Oreochromis niloticus</u>	am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-Ww.f	Bhujel et al. (2007)
<u>Pterophyllum scalare</u>	ab, am, Wwb, Wwp, Wwi, t-Ww, Ww-N	Espitia-Manrique et al. (2017), Korzelecka-Orkisz et al. (2012), Ortega-Salas et al. (2009)
<u>Oryzias latipes</u>	ab, aj, ap, am, Lb, Lj, Lp, Li, Wd0, Wwb, Wdb, Wwp, Wwi, Ri, t-L, t-Ww.f, t-N.f, t-S	Ankley and Johnson (2004), Egami and Etoh (1969), Faber (2013), Ghoneum and Egami (1982), Gonzales-Doncel et al. (2016), Hasebe et al. (2016), Iwamatsu and Egami (2004), Kang et al. (2002), Marty et al. (1995), Spencer et al. (2006), Stanley (1972), Teh and Hinton (1998)
<u>Belone belone</u>	ah, am, Lh, L.t, Lp, Li, Wwi, t-L, L-Ww, L-N, Ww-N	Dulcic et al. (2009), Zorica and Kec (2013), Zorica et al. (2011)
<u>Scomberesox saurus</u>	ab, am, Lb, Lp, Li, Wwi, Ri, t-L	Agüera and Brophy (2012), Brownell (1983)
<u>Hirundichthys affinis</u>	ab, ap, am, Lb, Lp, Li, Wwi, Ri, t-L, L-N	Casazza et al. (2005), Oxenford et al. (1994)
<u>Hyporhamphus picarti</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L-T	Döring et al. (2018), McBride and Thurman (2003)
<u>Hyporhamphus australis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Stewart and Hughes (2007)
<u>Hyporhamphus regularis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Stewart and Hughes (2007)
<u>Arrhamphus sclerolepis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Stewart and Hughes (2007)
<u>Nothobranchius furzeri</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, t-L.f, t-N.f	Berois et al. (2016), Blažek et al. (2013)
<u>Nothobranchius kadleci</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, t-L.f, t-N.f	Berois et al. (2016), Blažek et al. (2013)
<u>Fundulopanchax gardneri</u>	ab, ap, am, Lb, Li, L.t, Wwb, Wwi, Ww.t, Ri	Arimoro and Ofojekwu (2004)
<u>Anablepsoides hartii</u>	ap, am, Lb, Lp, Li, Wwi, Ni, t-L, t-Ww	Furness and Reznick (2014)
<u>Kryptolebias marmoratus</u>	ab, ap, am, Lb, Lp, Li, Ww.L, GSI, t-L.f	Gargeda et al. (2004), Parka et al. (2010), Sakakura and Noakes (2000)

Continuation of Table B.1		
species	data	references
<u>Millerichthys robustus</u>	ap, am, Lb, Lp, Li, Wwi, Ni, t-L, t-Ww	Dominguez-Castanedo et al. (2017)
<u>Cynopoecilus melanotaenia</u>	am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Arenzon et al. (1999, 2001)
<u>Austrolebias adloffi</u>	ap, Lb, Li, Ni, t-L-Tf, t-Ww-Tf, t-S	Liu and Walford (1966), Walford and Liu (1965)
<u>Austrolebias viarius</u>	ap, am, Lb, Li, Ni, t-L-Tf	Erreaa and Danulatb (2001)
<u>Austrolebias wolterstorffi</u>	ap, am, Lb, Li, Wwi, Ni, t-L-T, t-Ww-T	da Fonseca et al. (2013)
<u>Fundulus catenatus</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Wallus and Simon (2026)
<u>Fundulus chrysotus</u>	ap, am, Lt, Li, Wwb, Wwi, Ri,	
<u>Fundulus diaphanus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Edberg and Powers (2010), Phillips et al. (2007)
<u>Fundulus dispar</u>	ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	Wallus and Simon (2026)
<u>Fundulus julisia</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Rakes (1989)
<u>Fundulus grandis</u>	am, Li, Wwb, Wwp, Wwi, Ri, t-L	Patterson et al. (2013), Vastano et al. (2017)
<u>Fundulus heteroclitus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Kneib and Stiven (1978)
<u>Fundulus kansae</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Minckley and Klaassen (1969)
<u>Fundulus luciae</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri	Byrne (1976)
<u>Fundulus notatus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Nieman and Wallace (1974)
<u>Fundulus parvipinnis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-Ww	H. Pérez-Espana and Abitia-Cárdenas (1998)
<u>Fundulus seminolis</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	Durant et al. (1979)
<u>Fundulus stelleri</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Edberg and Powers (2010)
<u>Empetrichthys latos</u>	ap, am, Lp, Li, Wwb, L-Ww, L-N	Deacon and Williams (2010), Goodchild (2016), Uribe et al. (2012)
<u>Crenichthys baileyi</u>	ab, am, Lp, Li, Wwb, Wwi, dLb	Kopec (1949)
<u>Valencia hispanica</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, dLb, t-L	Caiola et al. (2001)
<u>Aphanius anatoliae</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Güçlü et al. (2007)
<u>Aphanius danfordii</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww, L-Ww	Yoğurtcuoğlu and Ekmekçi (2012)
<u>Aphanius dispar</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-Ww	Frenkel and Goren (2000)
<u>Aphanius fasciatus</u>	ab, ap, am, Lb, Lp, Li, Wwp, Wwi, Ri, t-L, t-Ww, L-Ww, X-JX	Leonardos and Sinis (1998, 1999), Sezen and Olmez (2010)
<u>Aphanius iberus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Fernandez-Delgado et al. (1988)
<u>Aphanius mento</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Güçlü and Küçük (2008, 2011), S.A. (2020)
<u>Cyprinodon bovinus</u>	ab, ap, am, Lp, Li, Wwb, Wwi	Cripe et al. (2008a), EPA (2002), Jordan and Evermann (1900), Kennedy (1977)
<u>Cyprinodon diabolis</u>	ab, ap, am, Li, Wwb, Wwi, Ri, dLb	Deacon et al. (1995)
<u>Cyprinodon elegans</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri	Leiser and Itzkowitz (2003)
<u>Cyprinodon macularius</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, dLb	Schoenherr (1988)
<u>Cyprinodon nevadensis</u>	ab, ap, am, Li, Wwb, Wwi, t-L-f	Lema and Nevitt (2006)

Continuation of Table B.1		
species	data	references
<u>Cyprinodon variegatus</u>	ab, aj, ap, am, Lb, Lj, Lp, Li, Wwb, Ri, t-L.f, t-Ww.f, L-Ww, t-N.f	Cripe et al. (2008b), EPA (2002), Foster (1967), Jordan and Evermann (1900), Page and Burr (1991), Parrish et al. (1978), Rosenfield and Sandoval-Green (2004), Schnitzler et al. (2017)
<u>Jordanella floridae</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww, T-ab	Beyger (2009), Foster et al. (1969), Mary et al. (2004)
<u>Belonesox belizanus</u>	ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, L-N	Turner and Snelson (1984)
<u>Gambusia affinis</u>	ab, aR.T, am, Lb, Lp, Li, Wwb, WwR, Wwi, Ri.T, t-Ww.Tf	Beadouin et al. (2008), Vondracek et al. (1988)
<u>Gambusia puncticulata</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Gambusia punctata</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Gambusia holbrooki</u>	ab, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	Beadouin et al. (2008)
<u>Heterandria formosa</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri	Brown (2016), Henrich (1988)
<u>Pseudoxiphophorus bimaculatus</u>	am, Lp, Li, Wwb, Wwi, L-N, t-L	Olinger et al. (2016)
<u>Girardinus metallicus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Girardinus uninotatus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Girardinus creolus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Girardinus denticulatus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Girardinus microdactylus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Girardinus falcatus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Quintana atrizona</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Limia vittata</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	de León et al. (2013)
<u>Poecilia latipinna</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Moshayedi et al. (2015), Travis et al. (1989)
<u>Poecilia reticulata</u>	ab, ap, am, Lb, Li, Wwb, Wwi, Ri, t-L.f, t-S.f	Comfort (1983), Garc'ia et al. (2008), Ursin (1967)
<u>Poecilia reticulata HPO</u>	ab.f, Li, Wdb.f, JO, t-Ww.f, t-L.f, t-N.f, L-Ww.f, t-S.f	Auer et al. (2018), Reznick et al. (2004)
<u>Poecilia reticulata HP Cur96</u>	ab.f, Li, t-Ww.f, t-L.f, t-N.f, L-Ww.f	Reznick (1996)
<u>Poecilia reticulata HP Mad91</u>	ab.f, Wdb.f, Li, t-Ww.f, t-L.f, t-N.f, L-Ww.f	Reznick and Bryant (1996)
<u>Poecilia reticulata HP Mrn91</u>	ab.f, Wdb.f, t-Ww.f, t-L.f, t-N.f, L-Ww.f	Reznick and Bryant (1996)
<u>Poecilia reticulata HP Mrn96</u>	ab.f, Li, t-Ww.f, t-L.f, t-N.f, L-Ww.f	Reznick (1996)
<u>Poecilia reticulata HPY</u>	ab.f, Li, Wdb.f, JO, t-Ww.f, t-L.f, t-N.f, L-Ww.f, t-S.f	Auer et al. (2018), Reznick et al. (2004)
<u>Poecilia reticulata HP Yar91</u>	ab.f, Wdb.f, Li, t-Ww.f, t-L.f, t-N.f, L-Ww.f	Reznick and Bryant (1996)

Continuation of Table B.1		
species	data	references
<u>Poecilia reticulata</u> HP	ab_f, Li, t-Ww_f, t-L_f, t-N_f, L-Ww_f	Reznick (1996)
<u>Yar96</u>		
<u>Poecilia reticulata</u> LPO	ab_f, Li, Wdb_f, JO, t-Ww_f, t-L_f, t-N_f, L-Ww_f, t-S_f	Auer et al. (2018), Reznick et al. (2004)
<u>Poecilia reticulata</u> LP	ab_f, Wdb_f, Li, t-Ww_f, t-L_f, t-N_f, L-Ww_f	Reznick and Bryant (1996)
<u>Mad91</u>		
<u>Poecilia reticulata</u> LP	ab_f, Wdb_f, Li, t-Ww_f, t-L_f, t-N_f, L-Ww_f	Reznick and Bryant (1996)
<u>Mrn91</u>		
<u>Poecilia reticulata</u> LP	ab_f, Li, t-Ww_f, t-L_f, t-N_f, L-Ww_f	Reznick (1996)
<u>Mrn96</u>		
<u>Poecilia reticulata</u> LP	ab_f, Li, t-Ww_f, t-L_f, t-N_f, L-Ww_f	Reznick (1996)
<u>Par96</u>		
<u>Poecilia reticulata</u> LP	ab_f, Li, t-Ww_f, t-L_f, t-N_f, L-Ww_f	Reznick (1996)
<u>PaT96</u>		
<u>Poecilia reticulata</u> LPY	ab_f, Li, Wdb_f, JO, t-Ww_f, t-L_f, t-N_f, L-Ww_f, t-S_f	Auer et al. (2018), Reznick et al. (2004)
<u>Poecilia reticulata</u> LP	ab_f, Wdb_f, Li, t-Ww_f, t-L_f, t-N_f, L-Ww_f	Reznick and Bryant (1996)
<u>Yar91</u>		
<u>Xiphophorus helleri</u>	ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-Ww	James and Sampath (2003), Moshayedi et al. (2015)
<u>Xiphophorus maculatus</u>	ab, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Felin (1951), Moshayedi et al. (2015)
<u>Xiphophorus montezumae</u>	am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Kruesi et al. (2011), Moshayedi et al. (2015)
<u>Atherina presbyter</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Moreno and Morales-Nin (2003), Pajuelo and Lorenzo (2000), Palmer and Culley (2006), Turnpenny et al. (1981)
<u>Atherina boyeri</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Dulčić et al. (2008), Leonardos and Sinis (2000), Pajuelo and Lorenzo (2000)
<u>Labidesthes sicculus</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Powles and Sandeman (2008)
<u>Leuresthes tenuis</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-Ww, L-N	Clark (1925)
<u>Menidia beryllina</u>	ab, ap, am, Lp, Li, Wwb, Ri, t-L, t-Ww	Conover and Ross (1982), EPA (2002), Huber and Bengtson (1999), Letcher and Bengtson (1993)
<u>Menidia extensa</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri	Anonymous (2001), EPA (2002)
<u>Menidia menidia</u>	ab_T, am, Lp, Li, Wwb, Ri, t-L, t-Ww	Bengsten et al. (1987), Conover and Ross (1982)
<u>Membras martinica</u>	ab, am, Lj, Lp, Li, Wwb, Wwp, Wwi, Ri, dLj, t-L	Martin and Drewry (1978)
<u>Odontesthes argentinensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	EPA (2002), Llopart et al. (2013)

Continuation of Table B.1		
species	data	references
<u>Chromis chromis</u>	ab, aj, ap, am, Lb, Lj, Lp, Li, Wwp, Wwi, Ri, t-L, L-Ww, Ww-JO	Alessandro (2014), Dulcic and Kraljevic (1995), Dulcic et al. (1994), Dulčić et al. (2005), Giacoletti (2016), Kingsford (1985), Macpherson and Raventos (2005), Valle et al. (2003)
<u>Pomacentrus amboinensis</u>	ab, ap, am, Lb, Lj, Lp, Li, Wwb, Wwj, Wwp, Wwi, Ri, t-L	Jones and McCormick (2002), Kingsford et al. (2017), Murphy et al. (2007)
<u>Pomacentrus coelestis</u>	ab, aj, ap, am, Lb, Lj, Lp, Li, Wwb, Wwj, Wwp, Wwi, Ri, t-L-f	Kingsford et al. (2017)
<u>Chelon labrosus</u>	ah, ab, ap, am, Lh, Lb, Lp, Li, Wwi, R.L, t-L, t-Ww	Leijzer (2006), Zouiten et al. (2008)
<u>Chelon ramada</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Koutrakis and Sinis (1994)
<u>Chelon saliens</u>	am, Lp, Li, Wwb, Wwp, Wwi, R.i, t-L	Koutrakis and Sinis (1994)
<u>Mugil cephalus</u>	am, Lp, Li, Wwb, Wwp, Wwi, R.i, t-L, L-Ww	nez Aguirre et al. (1999)
<u>Mugil curema</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	nez Aguirre et al. (1999)
<u>Mugil liza</u>	ab, am, Lp, Li, Wwb, Wwi, R.i, t-L, t-Ww	Garbina et al. (2014), Monteiro-Ribas and Bonecker (2001)
<u>Hyperprosopon argenteum</u>	am, Lb, Lp, Li, Wwi, t-L, Ww-N	DeMartini et al. (1983)
<u>Hysteroecarpus traskii</u>	am, Lp, Li, t-L, Ww-N	Bundy (1970)
<u>Pseudochromis flavivertex</u>	ab, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Mies et al. (2004), Olivotto et al. (2006)
<u>Lepadogaster lepadogaster</u>	ab, ap, am, Lb, L.t, Lp, Li, Wwi, Ri	Tojeira et al. (2012)
<u>Parablennius ruber</u>	ab, am, Lb, Lj, Lp, Li, Wwb, Wwi, GSI, t-L	Azevedo and Homem (2002), Faria et al. (2010)
<u>Lipophrys pholis</u>	am, Lb, Lp, Li, Wwb, Wwi, GSI, t-L	Carvalho et al. (2012), Faria et al. (1996)
<u>Enneapterygius atriceps</u>	am, Lp, Li, Wwb, t-L, L-Ww, L-N	Longeneckera and Langston (2005)
<u>Forsterygion lapillum</u>	ah, ab, aj, ap, am, Lh, Lj, Lp, Li, GSI, rB, t-L, L-W, T-JO	Foch (2018), Francis (2001), Fricke (1994), J.R and N.A (2012), McArley et al. (2017), McDermott and Shima (2006), Mensink (2014), Nagelkerken (2017), Shima and Swearer (2009), Taylor and Willis (1998)
<u>Gerres equulus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Iqbal et al. (2006, 2008)
<u>Gerres oyena</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	H.A. Lamtane and and Ndaro (2007), Kanak and Tachihara (2006)
<u>Ammodytes marinus</u>	ab, am, Lp, Li, Wwb, Ri, t-L.f, t-Ww.f	Bergstad et al. (2002), Boulcott et al. (2017), Régnier et al. (2018)
<u>Pseudopercis semifasciata</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f	González (2006)
<u>Uranoscopus scaber</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, t-Ww, L-N, Ww-N	Çoker et al. (2008), Demirhan et al. (2007)
<u>Achoerodus viridis</u>	ab, ap, am, Lb, Lp, L.t, Li, Wwp, Wwi, Ri	Gillanders (1995), Jeffrey (2007)

Continuation of Table B.1		
species	data	references
<u>Semicossyphus pulcher</u>	ab, ap, am, Lb, Lp, Li, Wwp, Wwi, Ri, t-L	Alonzo et al. (2004), Jirsa et al. (2007)
<u>Symphodus tinca</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Boughamou et al. (2015), Gordoa et al. (2000)
<u>Symphodus roissali</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Gordoa et al. (2000), Jirsa et al. (2007), Raventos and Planes (2009)
<u>Symphodus melops</u>	am, Lp, Li, Wwb, GSI, t-L, t-Ww	Sayer et al. (1996)
<u>Coris julis</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Alonso-Fernández and Palmer (2014), Gordoa et al. (2000)
<u>Labrus merula</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Gordoa et al. (2000), Jakov et al. (1999)
<u>Bodianus frenchii</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L _f , L-N _f	Cossington et al. (2010)
<u>Centrolabrus exoletus</u>	am, Lp, Li, Wwb, GSI, t-L, t-Ww	Sayer et al. (1996)
<u>Ctenolabrus rupestris</u>	ab, am, Lp, Li, Wwb, GSI, t-L, t-Ww	Sayer et al. (1995)
<u>Tautogolabrus adspersus</u>	am, Lb, Lp, Li, Wwb, t-L, L-N, L-Ww	Nitschke and Mather (2001), Serchuk and Cole (1974)
<u>Scarus rivulatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Lou (1993)
<u>Sillago robusta</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Hyndes and Potter (1996)
<u>Sillago bassensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Hyndes and Potter (1996)
<u>Dicentrarchus labrax</u>	ah _T , ab _T , aj, am, Lh, Lb, Lj, Li, Wwb, Wwp, Wwi, t-L, t-Ww _T , Ww-R, Ww-JX _T , T-JN _W	Anonymous (2008), Lika et al. (2014, 2015), MAYER et al. (1990), Papandroulakis (2012), Papandroulakis et al. (2014), Ruyet et al. (2004), Zanuy and Carrillo (1985)
<u>Morone americana</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Krüger (1965)
<u>Morone chrysops</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	
<u>Morone mississippiensis</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Monteleone and Houde (1990), Zervas (2010)
<u>Morone saxatilis</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	
<u>Platax orbicularis</u>	ab, aj, am, Lb, Lj, Lp, Li, Wwb, Wwj, Wwp, Wwi, Ri, t-Ww	Remoissenet et al. (2012)
<u>Chaetodon larvatus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Leis (1989), Zekeria (2003), Zekeria et al. (2006)
<u>Aplodinotus grunniens</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Argyrosomus regius</u>	ah, ab, aj, ap, am, L0, Lh, Lb, Lj, Lp, Li, Ww0, Wwb, Wwp, Wwi, GSI, t-L _f T, t-Le, t-Ww _f T, L-Ww, Ww-R, Ww-JO-T	Kir et al. (2017), Klimogianni et al. (2013), Lika et al. (2014), Mylonas et al. (2013), Papadakis et al. (2013), Papandroulakis (2013), Vargas-Chacoff et al. (2014)
<u>Argyrosomus japonicus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Lika et al. (2014), Silberschneider et al. (2009)
<u>Atractoscion nobilis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Anonymous (2001), Romo-Curiel et al. (2015)
<u>Cynoscion nebulosus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L _f	Bortone (2003), Nieland et al. (2002), Smith et al. (2008)

Continuation of Table B.1		
species	data	references
<u>Cynoscion othonopterus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L-f	Aragón-Noriega (2014), Bortone (2003)
<u>Larimichthys polyactis</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, GSI, t-L, t-Ww, L-Ww, Ww-N	Jiang et al. (2018), Li et al. (2011), Lim et al. (2010), Ma et al. (2017), Masuda et al. (1984), Shui (2000), Yan et al. (2006, 2014), Zhan et al. (2016), Zhang et al. (2010)
<u>Macrodon atricauda</u>	ap, am, Li, Wwb, Ri, t-L, L-Ww	Cardoso and Haimovici (2011)
<u>Micropogonias undulatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Barbieri et al. (1994), Hales and Reitzh (1992)
<u>Pogonias cromis</u>	am, Lj, Lp, Li, Wwb, Wwi, Ri, t-L	Olsen et al. (2018), Richards (2005)
<u>Sciaena umbra</u>	ah, ab, aj, ap, am, Lh, Lb, Lp, Li, Wwi, GSI, t-L	Lika et al. (2014), Papandroulakis (2013)
<u>Stellifer lanceolatus</u>	ap, am, Lp, Li, Wwb, Ri, t-L, L-Ww	Ramos-Miranda et al. (2009)
<u>Totoaba macdonaldi</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Cisneros-Mata et al. (1995)
<u>Umbrina canariensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Hutchings et al. (2006)
<u>Acanthurus lineatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Tucker (1998)
<u>Acanthurus olivaceus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Tucker (1998)
<u>Ctenochaetus striatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Leis (1989)
<u>Ctenochaetus binotatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Lou (1993)
<u>Zebrasoma scopas</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Leis (1989)
<u>Naso brevirostris</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Leis (1989)
<u>Naso hexacanthus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Leis (1989)
<u>Naso tuberosus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Leis (1989)
<u>Naso unicornis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Leis (1989)
<u>Naso vlamingii</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Leis (1989)
<u>Prionurus maculatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Choat and Axe (1996), Leis (1989)
<u>Pomacanthus imperator</u>	aj, am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww, L-Ww	Arellano-Martínez et al. (2007), Chung and Woo (1999), Thresher and Brothers (1985)
<u>Pomadasyss kaakan</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Al-Husaini et al. (2002)
<u>Conodon nobilis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Pombo et al. (2014)
<u>Rhomboplites aurorubens</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L, Ww-N	Allman (2007), Cuellar et al. (1996)
<u>Lutjanus analis</u>	ab, am, Lp, Li, Wwb, Ri, t-L, L-Ww	Burton (2002)
<u>Lutjanus fulviflamma</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Grandcourt et al. (2006), Hamamoto et al. (1992)
<u>Lutjanus guttatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Amezcuaa et al. (2006), Hamamoto et al. (1992)
<u>Lutjanus erythropterus</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	McPherson et al. (1992), Newman et al. (2000)
<u>Lutjanus malabaricus</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	McPherson et al. (1992), Newman et al. (2000)

Continuation of Table B.1		
species	data	references
<u>Lutjanus sebae</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	McPherson et al. (1992), Newman et al. (2000)
<u>Lutjanus carponotatus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Newman et al. (2000)
<u>Lutjanus vitta</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Newman et al. (2000)
<u>Lutjanus synagris</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Aschenbrenner et al. (2017)
<u>Lutjanus kasmira</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Morales-Nin and Ralston (1990)
<u>Caulolatilus affinis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Ramírez-Pérez et al. (2011)
<u>Lopholatilus chamaeleonticeps</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	Dawson (2021)
<u>Lobotes surinamensis</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww, L-Ww	Franks et al. (2001), Mickle and many others (2016)
<u>Boops boops</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Boufersaoui and Tamourt (2018), Boufersaoui and Zeroual (2018), Houria (2015)
<u>Lagodon rhomboides</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Nelson (2002)
<u>Sarpa salpa</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	van der Walt and Beckley (1997)
<u>Spicara smaris</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Tsangridis and Filippousis (1994)
<u>Argyrozona argyrozona</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Brouwer and Griffiths (2004)
<u>Dentex dentex</u>	ah, ab, aj, ap, am, Lh, Lb, Lj, Lp, Li, Wwi, GSI, t-L	Lika et al. (2014), Papandroulakis (2013)
<u>Pagellus erythrinus</u>	ah, ab, aj, ap, am, Lh, Lb, Lp, Li, Wwi, GSI, t-L	Lika et al. (2014), Papandroulakis (2013)
<u>Pagellus acarne</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-W	Boufersaoui (2016), Gaetani (1935)
<u>Lithognathus mormyrus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-W	Boufersaoui (2016), Divanach et al. (1983)
<u>Acanthopagrus berda</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, GSI	Connell (1996), Garratt (1993), Mathews and Samuel (1991), Papandroulakis (2013), Sheaves et al. (1999), Smith and Smith (1986)
<u>Acanthopagrus schlegelii</u>	ap, am, Lp, Li, Wwb, Wwi, GSI, t-L	Law and de Mitcheson (2018)
<u>Archosargus probatocephalus</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Beckman et al. (1991)
<u>Diplodus puntazzo</u>	ah, ab, aj, ap, am, Lh, Lb, Lj, Li, Wwi, GSI, t-L	Lika et al. (2014), Papandroulakis (2013), Papandroulakis et al. (2005a)
<u>Diplodus sargus</u>	ab, am, Lh, Lp, Li, Wwb, Wwi, Ri, t-L	Gordoa and Molí (1997)
<u>Diplodus annularis</u>	ab, am, Lh, Lp, Li, Wwb, Wwi, Ri, t-L	Gordoa and Molí (1997)
<u>Diplodus vulgaris</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Gordoa and Molí (1997)
<u>Diplodus cervinus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Pajuelo et al. (2003)
<u>Pagrus auriga</u>	ab, am, Lp, Li, Wwb, Wwi, GSI, t-L	Pajuelo et al. (2006a,b)
<u>Rhabdosargus sarba</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Radebe et al. (2002)
<u>Sparus aurata</u>	ah, ab, aj, ap, am, Lh, Lb, Lp, Li, Wwb, Wwj, Wwp, Wwi, GSI, t-L	Anonymous (2008), Kraljevic and Dulcic (1997), Lika et al. (2014), Papandroulakis (2013)

Continuation of Table B.1		
species	data	references
<u>Centracanthus cirrus</u>	am, Lp, Li, Wwb, Ri, t-L	Ozaydin et al. (2000)
<u>Siganus sutor</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, Ww-N	A.Al-Marzouqi et al. (2011), Nelson et al. (1992)
<u>Siganus rivulatus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	A.Al-Marzouqi et al. (2011), Bilecenoglu and Kaya (2002)
<u>Scatophagus argus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Gandhi (1998), Gupta (2016)
<u>Priacanthus macracanthus</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Joung and Chen (1992), Liu et al. (2001)
<u>Cepola macrophthalma</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Rodríguez et al. (2017), Stergiou et al. (1992)
<u>Capros aper</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Hussy et al. (2012)
<u>Lophius piscatorius</u>	ah, ab, ap, am, Lh, Lp, Li, Wwi, Ri, t-L, L-Ww	Dorel (1986), Hislop et al. (2001), Ofstad et al. (2013)
<u>Lophius budegassa</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww	Landa et al. (2001)
<u>Lophius vomerinus</u>	am, Lp, Li, Wwb, GSI, t-L, L-Ww	Maartens et al. (1999)
<u>Balistes vetula</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, L-Ww	de Albuquerque et al. (2011), Simmons (2008)
<u>Stephanolepis hispidus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Mancera-Rodríguez and Castro-Hernández (2004, 2015)
<u>Mola mola</u>	am, Lb, Lp, Li, Wwb, Ww.t, Wwi, R.L	Pope et al. (2010), Schmidt (1921)
<u>Masturus lanceolatus</u>	am, Lp, Li, Wwb, R.L, t-L, L-Ww	Liua et al. (2009), Pope et al. (2010)
<u>Sphoeroides maculatus</u>	am, Lp, Li, Wwb, Wwi, t-L, L-Ww, L-N	Lyczkowski-Shultz (1971), Merriner and Laroche (1977)
<u>Epigonus crassicaudus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Contreras-Reyes and Arellano-Valle (2013), Okamoto et al. (2011)
<u>Pempheris adusta</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Koeda et al. (2013, 2016)
<u>Pempheris schwenkii</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Koeda et al. (2013, 2016, 2012)
<u>Polyprion americanus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Papadaki et al. (2018), Peres and Haimovici (2004)
<u>Stereolepis gigas</u>	aj, am, Lj, Lp, Li, Wwb, Wwi, Ri, t-L.f	Benseman and Allen (2018), Hawk and Allen (2014)
<u>Scorpius aequipinnis</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Coulson et al. (2012)
<u>Elassoma zonatum</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Acantharchus pomotis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f, t-Ww.f	Pardue (1993)
<u>Centrarchus macropterus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Enneacanthus chaetodon</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww	Schwartz (1961)
<u>Enneacanthus gloriosus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f	Snyder and Peterson (1999)
<u>Pomoxis annularis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Pomoxis nigromaculatus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Pope et al. (1996), Pope and Willis (1998)
<u>Archoplites interruptus</u>	am, Lp, Li, Wwb, t-L, L-Ww, L-N	Vigg and Kucera (1981)
<u>Ambloplites rupestris</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Ryan and Harvey (1971)

Continuation of Table B.1		
species	data	references
<u>Micropterus coosae</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-Lf, L-Ww	Knight (2011), Parsons (1954)
<u>Micropterus dolomieu</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-Ww	Welsh et al. (2017)
<u>Micropterus punctulatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Micropterus salmoides</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Gash and Bass (1973)
<u>Micropterus treculii</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Lepomis auritus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Lepomis cyanellus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Lepomis gulosus</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Gash and Bass (1973)
<u>Lepomis humilis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Barney and Anson (1923)
<u>Lepomis macrochirus</u>	ab, ap, am, Lb, Li, Wwp, Wwi, Ri, t-L, t-Ww	Estes (1949), Hicks and Pierce (2012), Hogue and Kilambi (1975), Mecozzi (2008), Parr (2013), Swingle and Smith (1943), Tanner and Moffett (1995)
<u>Lepomis marginatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Lepomis megalotis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Lepomis microlophus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Lepomis miniatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Lepomis symmetricus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Siniperca chuatsi</u>	ab, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, Ww-JX-T, Ww-r-T	Liu et al. (1998)
<u>Amniataba caudavittata</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Potter et al. (1994), Wise et al. (1994)
<u>Epinephelus marginatus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, R.L, t-L	Cunha et al. (2009), Glamuzina et al. (1998), G"othel (1992), Heemstra and Randall (1993), Reñones et al. (2010), Seyboth et al. (2011)
<u>Epinephelus morio</u>	am, Lp, Li, Wwb, Wwi, R.L, t-L	Jones (2000)
<u>Epinephelides armatus</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	Moore et al. (2007)
<u>Hyporthodus octofasciatus</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	Wakefield et al. (2013, 2015)
<u>Serranus scriba</u>	ap, am, Lb, Lp, Li, Wd0, Wwb, Wwp, t-L, L-Ww, L-N	Alonso-Fernández et al. (2011), Alós et al. (2013, 2010), Alvarez-Ellacuria (2017)
<u>Serranus cabrilla</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Tserpes and Tsimenides (2001)
<u>Mycteroperca microlepis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Strelcheck et al. (2003)
<u>Percina caprodes</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Percina macrolepis</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Percina maculata</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Karr (1963)
<u>Percina nigrofasciata</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N, Ww-N	Karr (1963), Mathur (1973)
<u>Percina notogramma</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Link (1970)
<u>Percina peltata</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Link (1970)
<u>Percina phoxocephala</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Karr (1963)
<u>Percina sciera</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Page and Smith (1970)

Continuation of Table B.1		
species	data	references
<u>Percina shumardi</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	
<u>Percina tanasi</u>	ab, ap, am, Lb, Lp, Li, Wwb, Ri, L-Ww, t-L	Starnes (1977)
<u>Ammocrypta beanii</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Hems and Rooks (1984)
<u>Ammocrypta clara</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Drake et al. (2008)
<u>Ammocrypta pellucida</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Drake et al. (2008), Wallus et al. (1990)
<u>Crystallaria asprella</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	George et al. (1996)
<u>Nothonotus bellus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L	Fisher (1990)
<u>Nothonotus juliae</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	James and Taber (1986)
<u>Nothonotus maculatus</u>	am, Lb, Lp, Li, Wwb, Wwi, Ri, dLb	Page and Burr (1991), Ruble et al. (2016)
<u>Nothonotus rubrus</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	Irwin and Foltz (2012), Knight and Ross (1992)
<u>Nothonotus vulneratus</u>	am, Lb, Lp, Li, Wwb, Wwi, Ri, dLb	Page and Burr (1991), Ruble et al. (2016)
<u>Nothonotus wapiti</u>	am, Lb, Lp, Li, Wwb, Wwi, Ri, dLb	Page and Burr (1991), Ruble et al. (2016)
<u>Etheostoma asprigene</u>	ap, am, Lp, Li, Wwb, Wwi, t-L, L-N	Cummings et al. (1984)
<u>Etheostoma bellator</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L, L-N	Khudamrongsawat and Kuhajda (2007), Page and Burr (1991)
<u>Etheostoma blennioides</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Fahy (1954)
<u>Etheostoma barbouri</u>	ap, am, Lp, Li, Wwb, Ri, t-L, t-Ww, L-Ww	Flynn (1975)
<u>Etheostoma caeruleum</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Grady and Bart (1984)
<u>Etheostoma chermocki</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Khudamrongsawat et al. (2005)
<u>Etheostoma coosae</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	O'Neil and Drawer (1981)
<u>Etheostoma cragini</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	Taber et al. (1986)
<u>Etheostoma flabellare</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Karr (1964)
<u>Etheostoma gracile</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Braasch and Smith (1967)
<u>Etheostoma kennicotti</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Page (1975)
<u>Etheostoma microperca</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Johnsom and Hatch (1991)
<u>Etheostoma nigrum</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Karr (1963)
<u>Etheostoma olivaceum</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Page (1980)
<u>Etheostoma olmstedi</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Tsai (1972)
<u>Etheostoma pallididorsum</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Hambrick and Robison (1979)
<u>Etheostoma percunum</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Layman (1991)
<u>Etheostoma perlongum</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Shute et al. (1982)
<u>Etheostoma proeliare</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Barton and Powers (2010), Burr and Page (1978)
<u>Etheostoma pyrrhogaster</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Carney and Burr (1989)
<u>Etheostoma radiosum</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Scalet (1971)
<u>Etheostoma raneyi</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Johnston and Haag (1996)
<u>Etheostoma sagitta</u>	ap, am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww	Lowe (1979)
<u>Etheostoma scotti</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Barton and Powers (2010)
<u>Etheostoma simoterum</u>	ap, am, Lp, Li, Wwb, Wwi, t-L, L-N, L-Ww	Page and Mayden (1981)

Continuation of Table B.1		
species	data	references
<u>Etheostoma smithi</u>	ab, am, Lp, Li, Wwb, Wwi, t-L, L-N	Page and Burr (1976)
<u>Etheostoma spectabile</u>	am, Lb, Lp, Li, Wwb, Wwi, Ri, t-L-T	West (1966)
<u>Etheostoma squamiceps</u>	ap, am, Lp, Li, Wwb, Wwi, t-L, L-N, L-Ww	Page (1974)
<u>Etheostoma striatulum</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Page (1980)
<u>Etheostoma swaini</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Ruple et al. (1984)
<u>Etheostoma tetrazonum</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Taber and Taber (1983)
<u>Etheostoma trisella</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Ryon (1986)
<u>Etheostoma zonistium</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Carney and Burr (1989)
<u>Sander canadensis</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L.f, L-N, L-Ww	Carufel (1963), Johnston et al. (2012)
<u>Sander lucioperca</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, L-Ww, T-ab	Aarts (2007)
<u>Sander vitreus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Aarts (2007), He et al. (2005)
<u>Sander volgensis</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L	Aarts (2007), Kuznetsov (2010), Mishenko et al. (2016)
<u>Zingel asper</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Danancher et al. (2007)
<u>Gymnocephalus cernuus</u>	ab, ap, am, Lh, Lb, Lp, Li, Wwb, Wwi, Ri, t-L.f, L-Ww	van Emmerik (2004)
<u>Perca flavescens</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Ryan and Harvey (1980)
<u>Perca fluviatilis</u>	ab, ap, am, Lb, Lp, Li, Wwi, t-L, L-N	Jellyman (1980), Persson et al. (2004)
<u>Lethrinus lentjan</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Degoon and Ali (2013), Wassef (1991)
<u>Lethrinus mahsena</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Degoon and Ali (2013), Wassef (1991)
<u>Chaenocephalus aceratus</u>	ab, ap, am, Lj, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Traczyk (2015)
<u>Eleginops maclovinus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L	Brickle et al. (2005a), Licandeo et al. (2006)
<u>Notothenia coriiceps</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-Ww, L-N	Cali et al. (2017), Linkowski and Zukowski (1980), Postlethwait et al. (2016), White et al. (1996)
<u>Notothenia rossi</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, t-L	Burchett (1983)
<u>Patagonotothen guntheri</u>	ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Brickle et al. (2005b), Collins et al. (2008)
<u>Pleuragramma antarcticum</u>	ap, am, Li, Wwb, Wwi, t-L	Hubold and Tomo (1989)
<u>Dissostichus eleginoides</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Horn (2002)
<u>Dissostichus mawsoni</u>	ab, ap, am, Lp, Li, Wwb, Wwi, Ri, t-L	Horn (2002)
<u>Platycephalus fuscus</u>	am, Lp, Li, Wwb, Wwp, Wwi, GSI, t-L, L-Ww	Gray and Barnes (2008), Hicks et al. (2015)
<u>Platycephalus indicus</u>	ab, am, Lp, Li, Wwb, Wwi, GSI, t-L, t-Ww	Masuda et al. (2000)
<u>Chelidonichthys lucerna</u>	ah, ab, am, Lh, Lb, Lp, Li, Wwi, t-L, L-Ww, L-N	Dulcic et al. (2001), Ismen and Ismen (2004)

Continuation of Table B.1		
species	data	references
<u>Eutrigla gurnardus</u>	ab, ap, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Magnussen (2007)
<u>Helicolenus dactylopterus</u>	am, Lb, Lp, Li, Wwi, Ri, t-L	Allain and Lorance (2000), Munk and Nielsen (2005)
<u>Helicolenus percoides</u>	am, Lb, Lp, Li, Wwi, Ri, t-L	Paul and Horn (2009)
<u>Sebastes auriculatus</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Love and Johnson (1998)
<u>Sebastes capensis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Andrewan and Hecht (1996)
<u>Sebastes mentella</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Bakay and Mel'nikov (2008), Saborido-Rey et al. (2015)
<u>Sebastes minor</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww	Kolpakov (2006)
<u>Sebastes rastrelliger</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Love and Johnson (1998)
<u>Sebastes rufus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Watters et al. (2006)
<u>Sebastes taczanowskii</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, t-Ww	Kolpakov (2006)
<u>Scorpaena maderensis</u>	ab, am, Lp, Li, Wwb, Wwi, Ri, t-L	Mesa et al. (2005)
<u>Pontinus clemensi</u>	ap, am, Lp, Li, Wwb, Wwi, GSI, t-L	Jarrin et al. (2018)
<u>Anoplopoma fimbria</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Alderdice et al. (1988), Clarke et al. (1999), Head et al. (2014)
<u>Anarhichas denticulatus</u>	ab, ap, am, Lb, Lp, Li, Wwi, Ri, t-L, t-Ww	Andriyashev (1954), Munk and Nielsen (2005), Shevelev and Johannesen (2011), Wienerroither et al. (2011)
<u>Anarhichas lupus</u>	ab, ap, am, Lb, Lp, Li, Wwi, R.L, t-L, T-ab	Nelson and Ross (1992), Pavlov and Mokness (1995)
<u>Anarhichas minor</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-Ww_T	Imsland et al. (2006), Shevelev and Johannesen (2011)
<u>Zoarces viviparus</u>	ab, ap, am.T, Lb, Lp, Li, Wwb, Wwp, Wwi, Ww.L, rB.T, R.L	Brodte (2001), van der Veer (2009), Vetemaa (1999), Witte (2009)
<u>Zoarces elongatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww, L-N	Poezzhalova-Chegodaveva (2016)
<u>Lycodes raridens</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Balanov et al. (2006)
<u>Gymnelus viridis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Dunbrack and Green (2017)
<u>Hadropareia middendorffii</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww, L-N	Poezzhalova-Chegodaveva (2016)
<u>Stichaeus punctatus</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Dunbrack and Green (2017), Farwell et al. (1976)
<u>Alectrias alectrolophus</u>	am, Lp, Li, Wwb, Ri, t-L.f, t-Ww.f, L-Ww.f	Kolpakov and Milovankin (2014), Kolpakov and Miroshnik (2007)
<u>Pholis fangi</u>	am, Lp, Li, Wwb, Wwi, GSI, t-L	Hwang et al. (2008), Sawyer (1967), Vallis et al. (2007)
<u>Pholis gunnellus</u>	am, Li, Wwb, Wwp, Wwi, t-Ww, Ww-WwR	Sawyer (1967), Vallis et al. (2007)
<u>Gasterosteus aculeatus</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L.f	Jones and Hynes (1950), Paepke (1983), Wootton (1973), Wright et al. (2004)

Continuation of Table B.1		
species	data	references
<u>Pungitius pungitius</u>	ab, ap, am, Lb, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Jones and Hynes (1950), Paepke (1983), Wright et al. (2004)
<u>Culaea inconstans</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Acere and Lindey (1986), Stewart et al. (2007)
<u>Apeltes quadracus</u>	ab, am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Craig and FitzGerald (1982), Schwarz (1965)
<u>Hexagrammos agrammus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Kurita et al. (1991)
<u>Hexagrammos octogrammus</u>	am, Lp, Li, Wwb, Wwp, Ri, t-L, t-Ww	Shestakov and Nazarkin (2006)
<u>Hexagrammos stelleri</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L, t-Ww	Shestakov and Nazarkin (2006)
<u>Cyclopterus lumpus</u>	ah, ab, am, Lb, Lp, Li, Wwi, Ri, Ww-dWw.T, t-L	Nytrø (2013), Thorsteinsson (1983)
<u>Scorpaenichthys marmoratus</u>	ab, ap, am, Lb, Lp, Li, Wwi, t-L, L-Ww, Ww-N	Grebel and Cailliet (2010), O'Connell (1953)
<u>Myoxocephalus scorpius</u>	ah, ab, am, Lh, Lj, Lp, Li, Wwp, Wwi, ss, L-N, Ww-N	Luksenburg et al. (2004)
<u>Myoxocephalus thompsonii</u>	ap, am, Li, Wwb, Wwi, Ri, t-L	Geffen and Nash (1992)
<u>Batrachocottus baicalensis</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Tolmacheva et al. (2008)
<u>Paracottus knerii</u>	am, Lp, Li, Wwb, Ri, t-L, t-Ww	Tolmacheva and Bogdanov (2010)
<u>Cottus aleuticus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N, L-Ww	Greenbank (1966), Patten (1971)
<u>Cottus asperimus</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Daniels (1987)
<u>Cottus bairdii</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Bailey (1952), Patten (1971)
<u>Cottus beldingii</u>	am, Lp, Li, Wwb, Wwi, t-L, L-N	Ebert and Summerfelt (1969), Patten (1971)
<u>Cottus carolinae</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Gebhard and Perkin (2017)
<u>Cottus cognatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Bond et al. (2016)
<u>Cottus confusus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Hughes and Peden (1984), Patten (1971)
<u>Cottus extensus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Ruzycki et al. (1998)
<u>Cottus gobio</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L, tL_m, tL_f	Peters (2009)
<u>Cottus hangiongensis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Goto (1989)
<u>Cottus klamathensis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Daniels (1987)
<u>Cottus leiopomus</u>	am, Lp, Li, Wwb, Wwp, Wwi, t-L, L-N	Meyer et al. (2008)
<u>Cottus pitensis</u>	am, Lp, Li, Wwb, Wwi, Ri, t-L	Daniels (1987)
<u>Cottus volki</u>	am, Lp, Li, Wwb, t-L, t-Ww, L-Ww, L-N	Kolpakov (2011)
<u>Gymnocanthus herzensteini</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Panchenko (2010)
<u>Gymnocanthus detrisus</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Panchenko (2010, 2012)
<u>Gymnocanthus pistilliger</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Panchenko (2012)

Continuation of Table B.1		
species	data	references
<u>Gymnocanthus</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Panchenko (2012)
<u>intermedius</u>		
<u>Taurocottus bergii</u>	am, Lp, Li, Wwb, Ri, t-L, L-Ww	Panchenko et al. (2015)
<u>Leptocottus armatus</u>	am, Lp, Li, Wwb, Wwp, Wwi, Ri, t-L	Weiss (1962)

Table B.2: The codes of the data types as presented in Table B.1. Zero variate data left, uni-variate data right. Life history events: b birth, s settlement, j end of acceleration, p puberty, m death, i death. T stands for temperature.

code	description	code	description
ah	age at h	t-Le	time, embryo length
ah_T	age at h (several T))	t-Le_T	time, embryo length (several T)
ab	age at birth	t-L	time, length
ab_T	age at birth (several T)	t-L_T	time, length (several T)
ab_f	age at birth (several f)	t-L_f	time, length (several f)
as	age at s	t-L_fT	time, length (several f, T)
aj	age at j	t-dL	time, change in length
ap	age (or time since birth) at p	t-VY	time, yolk volume
am	age at death (life span)	t-Wwe	time, embryo wet weight
am_T	age at death (several T)	t-Ww	time, wet weight
L0	length at 0	t-Ww_f	time, wet weight (several f)
Lh	length at h	t-Ww_T	time, wet weight (several T)
Lb	length at b	t-Ww_fT	time, wet weight (several f, T)
Ls	length at s	t-WwR	time, gonad wet weight
Lj	length at j	t-WdYe	time, embryo dry weight (yolk)
Lp	length at p	t-Wde	time, embryo dry weight (total)
Li	length at i	t-Wd_T	time, dry weight (several T)
L_t	length at time t	t-E	time, energy content
L_W	length at time weight	t-p+	time, heat production
dLb	change in length at b	t-N	time, number of offspring
dLp	change in length at p	t-N_f	time, number of offspring (several f)
dLj	change in length at j	t-JX_T	time, ingestion rate (several T)
Ww0	wet weight at 0	t-JCe	time, embryo CO ₂ production
Wwh	wet weight at h	t-JOe	time, embryo O ₂ consumption
Wwb	wet weight at b	t-JNe	time, embryo NH ₃ production
Wwj	wet weight at j	t-S	time, surviving fraction
WwR	wet weight at R	t-S_f	time, surviving fraction (several f)
Wwp	wet weight at p	t-dC	time, condition factor
Wwi	wet weight at i	X-JX	food density, ingestion rate
Ww_L	wet weight at length	L-L	length, length (different length measures)
Ww_t	wet weight at time	L-dL	length, change in length
Wd0	dry weight at 0	L0-Lt	length at capture, length at recapture
Wdh	dry weight at h	L-Ww	length, wet weight
Wdb	dry weight at b	L-Ww_f	length, wet weight (several f)

Table B.3: Continuation of Table B.3.

code	description	code	description
Wdb_f	dry weight at b (several f)	L-Wde_T	length, embryo dry weight (several T)
Wdj	dry weight at j	L-Wd	length, dry weight
E0	reserve energy at 0	L-N	length, number of eggs/offspring
rB	von Bertalanffy growth rate	L-N_f	length, number of eggs/offspring (several f)
rB_T	von Bertalanffy growth rate (several T)	L-X	length, cumulated food ingested
Ri	reproduction rate at i	L-JO_T	length, O ₂ consumption (several T)
R_L	reproduction rate at length	Ww0-Wwt	wet weight at capture, wet weight at recapture
R_W	reproduction rate at weight	Ww-dWw_T	wet weight, change in wet weight (several T)
GSI	gonado-somatic index	Ww-N	wet weight, number of eggs/offspring
Ni	(total) number of offspring at i	Ww-WwR	wet weight, clutch wet weight
JO_W	O ₂ consumption at W	Ww-R	wet weight, reproduction rate
ss	supply stress	Ww-JX_T	wet weight, ingestion rate (several T)
		Ww-JO	wet weight, O ₂ consumption
		Ww-JO_T	wet weight, O ₂ consumption (several T)
		T-ah	temperature, age at h
		T-ab	temperature, age at b
		T-aj	temperature, age at j
		T-dL	temperature, change in length
		T-dWw_f	temperature, change in wet weight (several f)
		T-JX	temperature, food consumption
		T-JO	temperature, O ₂ consumption
		T-JO_f	temperature, O ₂ consumption (several f)
		T-JN_W	temperature, NH ₃ production (several W)

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