

**Supplementary material**

**Fish larvae and recruitment patterns in floodplain lagoons  
of the Australian Wet Tropics**

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**Table S1. Published life history information for species recorded in the present study**

Data from field research are drawn from studies from northern and eastern Australia. Fish lengths are standard length unless stated. CFL, caudal fork length; TL, total length

Taxa	Field or aquaria-based study	River and region	River type	Spawning period	Length at hatching	Length at metamorphosis	Age and growth details	Length at sexual maturity	Age at sexual maturity	Reference
<i>Anguilla reinhardtii</i>	Field	Albert River, south-east Queensland	Lowland river or estuary	-	-	-	Onset of metamorphosis (from leptocephalus to glass eel) occurred on average by 124 days post-hatch; glass eels reached 50–55 mm TL in ~150–180 days	-	-	McKinnon <i>et al.</i> (2002)
<i>Anguilla reinhardtii</i>	Field	Various, north-east Australia	Lowland river or estuary	Aseasonal	-	<50 mm TL	Age and length at recruitment into rivers ranged from 174 to 188 days post-hatch and ~50 mm TL respectively. Growth rates of 0.25 mm day <sup>-1</sup> for fish up to ~50 mm TL	-	-	Shiao <i>et al.</i> (2002)
<i>Neosilurus ater</i>	Field	Ross River, Townsville	Tributary stream	Feb–Mar (wet season)	5.7–6.0 mm TL	~25 mm TL	Metamorphosis occurred approximately four weeks post-hatch; fish reached 75–85 mm TL by 9–11 weeks post-hatch	-	-	Orr and Milward (1984)
<i>Neosilurus ater</i>	Field	Alligator Rivers region, Northern Territory	Floodplain river	Early wet season (Nov–Dec)	-	-	-	Males: 260 mm TL Females: 280 mm TL	2 years (?)	Bishop <i>et al.</i> (2001)

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<i>Neosilurus hyrtlii</i>	Field	Ross River, Townsville	Tributary stream	Feb–Mar (wet season)	5.7–6.0 mm TL	~25 mm TL	Metamorphosis occurred approximately four weeks post-hatch; fish reached 85–95 mm TL by 9–11 weeks post-hatch	–	–	Bishop <i>et al.</i> (2001)
<i>Neosilurus hyrtlii</i>	Field	Alligator Rivers region, Northern Territory	Floodplain river	Early wet season (Nov–Dec)	–	–	–	Males: 135 mm TL Females: 135 mm TL	12 months (?)	Bishop <i>et al.</i> (2001)
<i>Craterocephalus stercusmuscarum</i>	Field	Alligator Rivers region, Northern Territory	Floodplain river	Aseasonal: late dry season (September–October) and mid wet season (Jan–Mar); variable across years	–	–	–	Males: 27 CFL Females: 29 CFL	<12 months	Bishop <i>et al.</i> (2001)
<i>Craterocephalus stercusmuscarum</i>	Field	Johnstone River, North Queensland	Tributary stream	Dry season (Sept–Nov)	4.8–6.4 mm	9–11 mm	–	Males: 36 mm SL Females: 46 mm SL (lowland lineage)	<12 months	Pusey <i>et al.</i> (2004)
<i>Craterocephalus stercusmuscarum</i>	Aquaria	–	–	–	4–4.5 mm TL (1–3 days after hatching)	–	Fish grew from 4.0–4.5 mm TL to 11.0–14.3 mm TL in 40 days	–	–	Ivanstovff <i>et al.</i> (1988)

Taxa	Field or aquaria-based study	River and region	River type	Spawning period	Length at hatching	Length at metamorphosis	Age and growth details	Length at sexual maturity	Age at sexual maturity	Reference
<i>Melanotaenia splendida</i>	Field	Johnstone River, North Queensland	Tributary stream	Mainly dry season (Sep–Nov) with wet-season reproduction in habitats protected from high flows	3.9–4.5 mm	10–14 mm	–	Males: 38 mm Females: 44 mm	<12 months	Pusey <i>et al.</i> (2004)
<i>Melanotaenia splendida</i>	Field	Barron River, North Queensland	Riverine	–	–	–	Fish measuring 18 mm SL were ~150 days old	–	–	Richard Hunt; unpublished data
<i>Melanotaenia splendida</i>	Aquaria	–	–	–	3.7 mm	–	Larvae reached 6.74 mm SL 14 days after hatching	–	–	Humphrey <i>et al.</i> (2003)
<i>Ambassis agassizii</i>	Field	Mary River, south-east Queensland	Riverine	Sep–Dec	–	–	–	Males: 28.1 mm Females: 25.6 mm	–	Pusey <i>et al.</i> (2004)
<i>Ambassis agassizii</i>	Field	Brisbane River, south-east Queensland	Riverine	Oct–Nov	3.0 mm TL	–	–	–	12 months	Milton and Arthington (1985)
<i>Ambassis agassizii</i>	Aquaria	–	–	–	–	–	Fish reached 12 mm SL by 60 days post-hatch	–	–	Leggett 1984
<i>Denariusa bandata</i>	Field	Alligator Rivers region, Northern Territory	Floodplain river	Aseasonal	–	>7 mm CFL	Modal length of population increased from 16–17 mm CFL to 31–32 mm CFL over 8-month period	Males: 25 mm CFL Females: 31 mm CFL	<12 months	Bishop <i>et al.</i> (2001)
<i>Lates calcarifer</i>	Field	Norman River, North Queensland	Floodplain river	Peak between Oct and Jan	–	–	–	~300 mm TL	≥3 years	Davis (1982)

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<i>Lates calcarifer</i>	Field	Various, North Queensland	–	Peak between Oct and Feb	–	–	0+ fish reached 120 mm TL by April	–	–	Russell and Garrett (1985)
<i>Lates calcarifer</i>	Field	Papua New Guinea	–	Oct–Feb, with a peak between Nov and Jan	1.5 mm TL	–	–	–	–	Moore (1982)
<i>Lates calcarifer</i>	Aquaria	–	–	–	–	>8.7 mm TL	–	–	–	Russell <i>et al.</i> (1989)
<i>Glossamia aprion</i>	Field	Alligator Rivers region, Northern Territory	Floodplain river	Late dry season and early wet season	7 mm CFL	–	–	Males: 60 mm CFL Females: 70 mm CFL	<12 months	Bishop <i>et al.</i> (2001)
<i>Glossamia aprion</i>	Field	Mulgrave River, North Queensland	Riverine	–	–	9–12.5 mm	–	–	–	Godfrey (2011)
<i>Hypseleotris compressa</i>	Field	Alligator Rivers region, Northern Territory	Floodplain river	Mid wet season (Jan–Mar)	–	–	–	–	–	Bishop <i>et al.</i> (2001)
<i>Hypseleotris compressa</i>	Field	South-east Queensland	–	Concentrated in summer and autumn	–	–	–	Males: 41.3 mm Females: 62.4 mm	12 months (?)	Pusey <i>et al.</i> (2004)
<i>Hypseleotris compressa</i>	Field	Mulgrave River, North Queensland	Lowland river	–	<6 mm	11.5–14.25 mm	–	–	–	Godfrey (2011)
<i>Hypseleotris compressa</i>	Aquaria	–	–	–	1.35 mm	4.3–6.5 mm	Fish observed to increase in size from 1.35 mm TL to 18.3 mm TL in 89 days	–	–	Dotsu <i>et al.</i> (2000)

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<i>Hypseleotris</i> sp. 1	Field	Mary River, south-east Queensland	Riverine	Concentrated between Sep and Jan	–	–	–	Males: 30.8 mm Females: 32.4 mm	12 months	Pusey <i>et al.</i> (2004)
<i>Mogurnda adspersa</i>	Field	Wet Tropics rivers, North Queensland	Various	Concentrated in the dry season (Oct–Nov)	–	7.8–10 mm	–	Males: – Females: 54 mm SL	6 months	Pusey <i>et al.</i> 2004; Close <i>et al.</i> 2005
<i>Mogurnda adspersa</i>	Aquaria (?)	–	–	–	3.2–5.0 mm TL	–	–	–	–	Pusey <i>et al.</i> (2004)
<i>Mogurnda adspersa</i>	Aquaria	–	–	–	–	–	Fish were reported to grow to 10 mm after 6 weeks, 25 mm after 2 months and 50 mm at 6–7 months	–	6 months	Hansen (1988); Tappin (1997)
<i>Mogurnda adspersa</i>	Aquaria	–	–	–	–	–	Fish reached 12–27 mm TL after 41 days post-hatch	–	–	Starrs <i>et al.</i> (2013)

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