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D 19-22 + adipose fin A 12-14 P₁ 11 P₂ 8-9 C 19 V 48

Distribution Endemic to southern Australia from Laguna Bay, QLD (26°22'S) to Houtman Abrolhos IIs., WA (28°49'S), including Tasmania. Found on the continental shelf on reef and soft bottom habitats from inshore waters to depths of 250 m. The benthic adults are characterised by a tapering body with red/pink blotches dorsally and laterally and an adipose fin. The eye is moderate. The snout is pointed and the mouth is large with several rows of small sharp teeth. Maximum size 60 cm.

Diagnostic characters

- 16-20+28-32 = 48 myomeres
- Dorsal-fin count 19-22
- Anal-fin count 12-14
- 2 or more melanophores ventrally on tail, 1 anterior and 1 posterior to the anal-fin base
- 1-2 melanophores on caudal-fin base, located on, but not between, the lobes of the caudal fin
- Dense saddle shaped patch of pigment over 25 to 50% of hindgut
- Preanal length is moderate 48-54%

Description of larvae

Morphology Body elongate in early preflexion larvae (BD 10-11%), but becomes slightly deeper in flexion (BD 11-12%) and postflexion larvae (BD 12-15%). Head is moderate (HL 19-25% in preflexion and flexion and 24-29% in postflexion larvae). Small, canine teeth on the upper and lower jaw in the smallest examined specimens (4.1 mm). The nasal pit begins to roof over by 8.5 mm and both nostrils are developed by 9.5 mm. The preanal length is moderate 48-54% (PAL in *H. curtirostris* is 55-63%), primarily because the head is moderate in size. The gut remains straight and has a striated, relatively swollen hindgut. The gas bladder is moderately conspicuous. Unusually, the anal fin is the first to form, followed by formation of 7-14 "stalks" in the dorsal finfold (8.3–9.5 mm, Fig. C). The "stalks" disappear before the dorsal fin forms, accounting for its relatively late appearance. The adipose fin begins to differentiate from the finfold after the dorsal fin (11.2 mm, Fig. D).

It is opposite the anal fin and reduces in size with growth. Unusually, the pelvic bud forms as a thickening mid-laterally on the gut, that then moves anteriorly and ventrally before rays form.

Size at

Hatching	<4.1 mm
Notochord flexion	6.9 – 8.3 mm
Settlement	>15.4 mm
Formation of fins:	
Caudal 6.6-8.1 mm; Dorsal 9.7-14.7 mm; Anal 7.3-9.5 mm; Pectoral 8.1-14.7 mm; Pelvic 8.1-14.7 mm	

Pigmentation

Larvae are lightly pigmented. **External:** No pigment on the operculum. One to 2 small melanophores may be present behind or below the pectoral-fin base. A distinct saddle-like patch of dense pigment is situated on the hindgut. Gut pigment is primarily external and covers 25-30% of the hindgut in preflexion larvae. Some of the pigment has expanded and become internal in flexion larvae. The pigment is primarily internal and has expanded to cover up to 50% of the hindgut in postflexion larvae. Two melanophores are positioned ventrally on the tail, anterior and posterior to the anal-fin base, and move to become partially internal during flexion stage. The 15.4 mm specimen has 5 additional melanophores ventrally on the body and 5 on the anal-fin ray bases. One expanded melanophore is present under notochord tip in preflexion larvae, remaining at the base of lower caudal-fin rays in postflexion larvae. A smaller, second melanophore develops at the base of the upper caudal-fin rays in early postflexion larvae.

Figure - Larvae of *Hime purpurissatus*. **A** Preflexion (I.33901-088). **B** Flexion (I.42964-001). **C** Postflexion, note 13 "stalks" in the dorsal finfold (I.33957-016). **D** Postflexion (I.33901-087). **E** Postflexion (I.33893-007). All specimens from off Sydney, NSW. Illustrated by J.M. Leis and inked by S. Bullock.

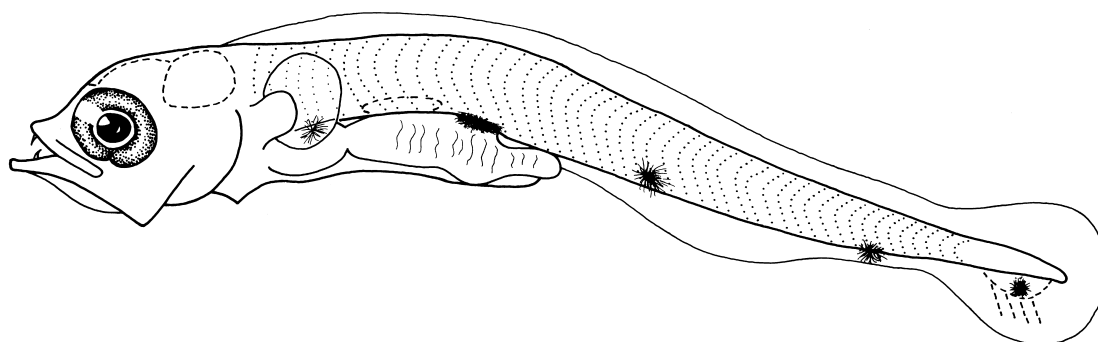
Material Examined The description is based on detailed examination of 24 larvae (4.1–15.4 mm), and more superficial examination of more than 400 others from off Longreef, NSW (33°35'S) to Marley Beach, (34°08'S) NSW. AMS I.33901-088, I.33901-085, I.33901-086, I.40938-005, I.33890-015, I.40937-005, I.34011-016, I.33948-009, I.33957-016, I.33969-034, I.33942-008, I.34011-016, I.33965-022, I.33959-009, I.33901-087, I.33893-007, I.40936-002, I.40937-006, I.42964-001, I.42964-002

Identification justification Aulopids of 2 species of 1 genus occur in NSW waters (Hoese et al. in press), *Hime purpurissatus* and *Hime curtirostris*.

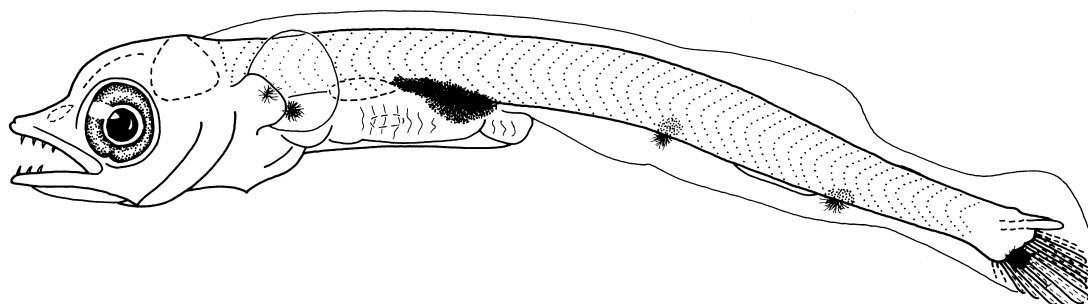
The species are separated by unique vertebral and fin-ray counts. *H. purpurissatus* has 48 vertebrae and D 19-22, A 12-14, where as *H. curtirostris* has 42-43 vertebrae and D 15-17, A 9-10.

References Kuitert, R.H. 1993. Coastal Fishes of South-Eastern Australia. Crawford House Press. Pp. 437

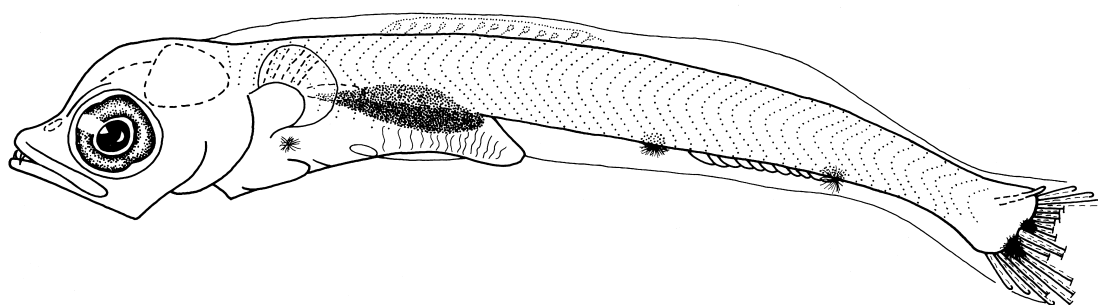
Hoese, D.F., D. J. Bray, G. R. Allen, C. J. Allen, N. J. Cross & J. R. Paxton (in press). Pisces (part 2), Mugilidae to Molidae. Zoological Catalogue of Australia vol 7 (part 2) Canberra : Australian Government Publishing Service



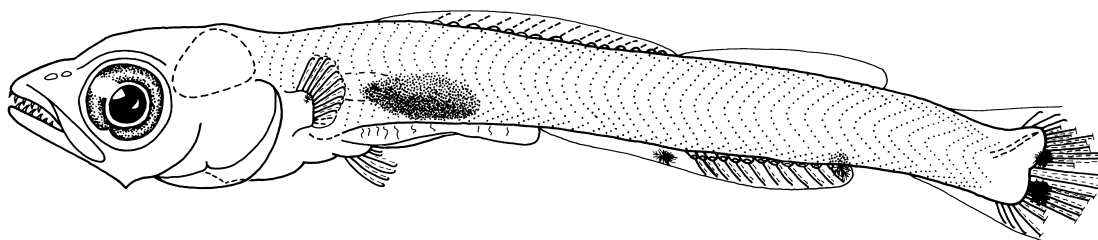
A 4.1 mm



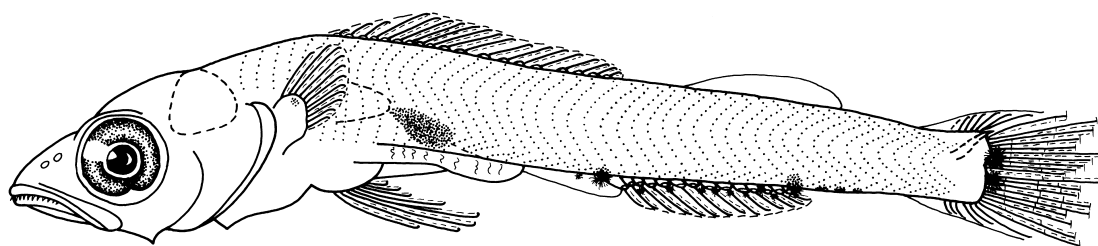
B 7.4 mm



C 8.6 mm



D 11.2 mm



E 15.4 mm