

MERISTICS

Fins:

Dorsal rays – XI-XII+14-16
 Anal rays – II+14-16
 Pelvic rays – I+3
 Pectoral rays – 12

Myomeres:

Total number –

LIFE HISTORY

Range: Southeast Atlantic: Atlantic coast from Morocco to the English Channel. Also known from the Mediterranean and Black Sea.

Habitat: demersal; marine; depth range 10-400 m.

Spawning season: spring and summer.

ELH pattern: Oviparous, demersal eggs and planktonic larvae.

MAIN REFERENCES

- Cunningham, J.T. (1889). Studies of the reproduction and development of teleostean fishes occurring in the neighbourhood of Plymouth. *J. mar. bio. Ass. U.K.*, 1: 370-375.
- Ehrenbaum, E. (1905-1909). *Eier und Larven von Fischen. Nordisches Plankton*, 1: 413pp.
- Ford, E. (1922a). On the young of *Blennius ocellaris* L., *Blennius pholis* L., and *Blennius gattorugine*. *J. mar. biol. Ass. U.K.*, 12: 688-692.
- Lebour, M.L. (1927). The eggs and newly hatched young of the common blennies from the Plymouth neighbourhood. *J. mar. biol. Ass. U.K.*, 14: 647-650.
- Padoa, E. (1933-1956). Benniidae. *Uova, larve e stadi Giovanili di Teleostei: monografia elaborata con l'uso del materiale raccolto e sveriato da Salvatore Lo Bianco. Fauna e Flora Golfo Napoli Monogr.* 38: 720-745.
- Russell, F.S. (1976). *The eggs and planktonic stages of British marine fishes*. Academic Press, London: 524pp.

EARLY LIFE HISTORY DESCRIPTION

EGGS

Capsule diameter – 1.12-1.20 mm
 No. of oil globules – many oil globules
 Shell surface – smooth, nearly spherical
 Pigment -
 Yolk - unsegmented
 Diameter of oil globules -
 Diagnostic features -

LARVAE

Hatching length – 4.6 mm
 Yolk-sac absorption -
 Flexion length -
 Transformation length -
 Pigmentation – Newly hatched larva:
 melanophores on snout, head, peritoneal area
 and a strongly pigmented pectoral fin (arranged
 in longitudinal rows between the fin rays).
 Postanal row of pigments along the posterior
 half of the caudal region. Late larva: large,
 rounded in shape and heavily pigmented
 pectoral fin with rows of large melanophores.
 Diagnostic features - Characteristic pigmentation,
 large, round and heavily pigmented pectoral
 fins.

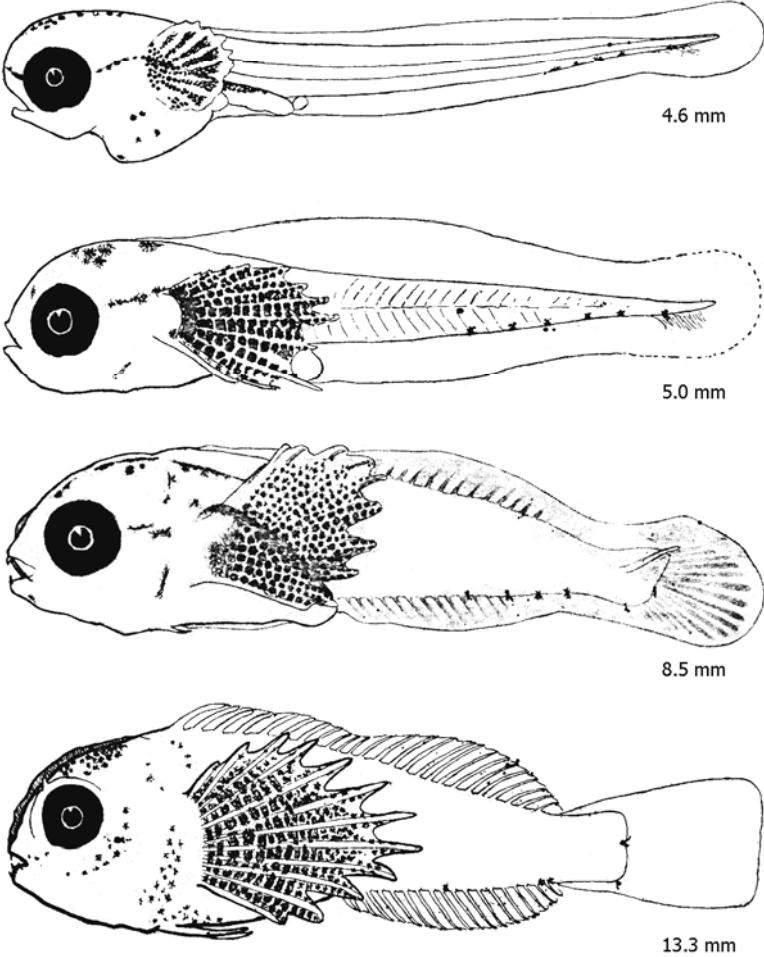


Plate 82- Early life history stages of *Blennius ocellaris*. Ford (1922a).

BLENNIIDAE

Coryphoblennius galerita (Linnaeus, 1758)

MERISTICS

Fins:

Dorsal rays – XIII+16-17

Anal rays – II+16-19

Pelvic rays – I+3

Pectoral rays – 12

Myomeres:

Total number –

LIFE HISTORY

Range: Eastern Atlantic: along the coasts of western England and the British Channel, Spain, Portugal, France, Morocco, Madeira, Canary Islands; Mediterranean Sea, Sea of Marmara, and the Black Sea.

Habitat: demersal; marine.

Spawning season: spring and summer.

ELH pattern: Oviparous, demersal eggs and planktonic larvae.

MAIN REFERENCES

- Fives, J.M. (1980). An account of the eggs and developmental stages of Montagu's blenny, *Coryphoblennius galerita* (L.), with notes on the reproductive behaviour of the adults. *Journal of the marine biological Association, U.K.*, 60: 749-757.
- Fives, J.M. (1986). Blenniidae of the North Atlantic (revised). Fich. Ident. Plancton, 172: 6pp.
- Padoa, E. (1933-1956). Benniidae. *Uova, larve e stadi Giovanili di Teleostei: monografia elaborata con l'uso del materiale raccolto e sveriato da Salvatore Lo Bianco. Fauna e Flora Golfo Napoli Monogr.38*: 720-745.
- Russell, F.S. (1976). *The eggs and planktonic stages of British marine fishes*. Academic Press, London: 524pp.

EARLY LIFE HISTORY DESCRIPTION

EGGS

Capsule diameter – ca. 1 mm

No. of oil globules – golden-yellow oil globules

Shell surface – smooth, nearly spherical

Pigment -

Yolk -

Diameter of oil globules -

Diagnostic features -

LARVAE

Hatching length – 3.3 mm

Yolk-sac absorption -

Flexion length -

Transformation length -

Pigmentation - Melanophores on top and back of head and on auditory capsule. Pigmented pectoral fins. Melanophores on top of gut and a metameric series of 24-25 melanophores along posterior ventral margin from fifth to sixth postanal myomere to urostyle tip.

Diagnostic features – Characteristic pigmentation. Pointed pectoral fins extending to second or third postanal body segment.

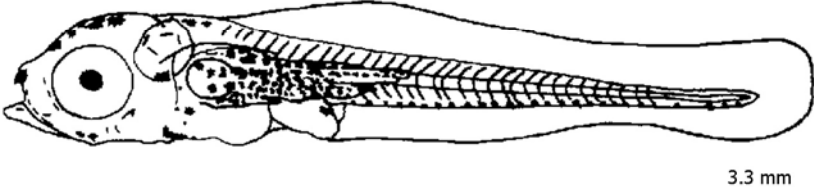


Plate 83- Early life history stages of *Coryphoblennius galerita*. Fives (1986).

MERISTICS**Fins:**

Dorsal rays – XII+18-19
 Anal rays – II+19
 Pelvic rays – I+3
 Pectoral rays – 13

Myomeres:

Total number –

LIFE HISTORY

Range: Eastern Atlantic: southern Norway to Morocco and Madeira, including the Mediterranean and the Balearics.

Habitat: demersal; marine; depth range 0-8 m.

Spawning season: winter and spring.

ELH pattern: Oviparous, demersal eggs and planktonic larvae.

MAIN REFERENCES

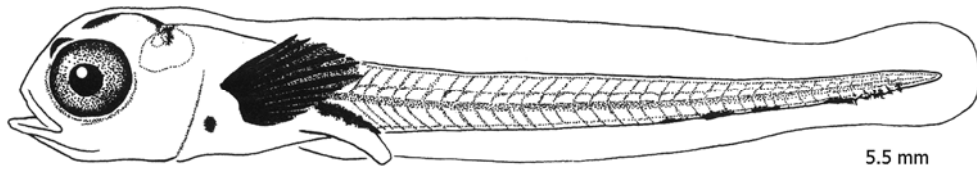
- Ford, E. (1922a). On the young of *Blennius ocellaris* L., *Blennius pholis* L., and *Blennius gattorugine*. *J. mar. biol. Ass. U.K.*, 12: 688-692.
- Faria, C., R. Borges, F. Gil, V.C. Almada, E.J. Gonçalves (2002). Embryonic and larval development of *Lipophrys pholis* (Pisces: Blenniidae). *Scientia Marina*, 66 (1): 21-26.
- Fives, J.M. (1986). Blenniidae of the North Atlantic (revised). *Fich. Ident. Plancton*, 172: 6pp.
- Lebour, M.L. (1927). The eggs and newly hatched young of the common blennies from the Plymouth neighbourhood. *J. mar. biol. Ass. U.K.*, 14: 647-650.
- Munk, P., J. G. Nielsen (2005). *Eggs and larvae of North Sea fishes*. Biofolia, Denmark: 215pp.
- Padoa, E. (1933-1956). Blenniidae. *Uova, larve e stadi giovanili di Teleostei: monografia elaborata con l'uso del materiale raccolto e sveriato da Salvatore Lo Bianco. Fauna e Flora Golfo Napoli Monogr.* 38: 720-745.
- Russell, F.S. (1976). *The eggs and planktonic stages of British marine fishes*. Academic Press, London: 524pp.

EARLY LIFE HISTORY DESCRIPTION**EGGS**

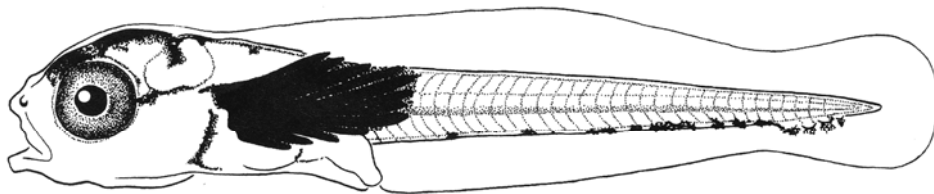
Capsule diameter – 1.18-1.6 mm
 No. of oil globules – several oil globules
 Shell surface – smooth, hemispherical
 Pigment -
 Yolk - unsegmented
 Diameter of oil globules -
 Diagnostic features -

LARVAE

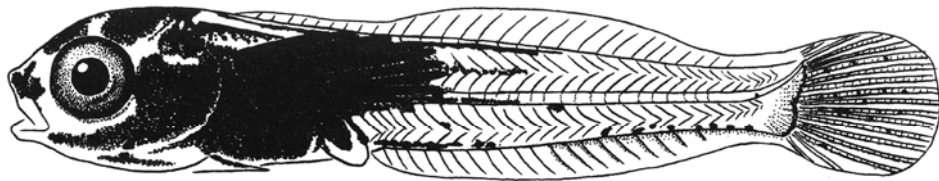
Hatching length – 5 mm
 Yolk-sac absorption – 5.0-5.5 mm
 Flexion length – 10 mm
 Transformation length – 17-19 mm
 Pigmentation – Newly hatched larvae: rounded and heavily pigmented pectoral fins (12 radial rows of melanophores). Peritoneal pigmentation. Late larva: narrow, pointed and heavily pigmented pectoral fin. A few postanal ventral melanophores in the posterior half of the caudal region and a vertical row at the base of the caudal fin. Notochordal row of melanophores evident anteriorly.
 Diagnostic features – Heavily pigmented pectoral fins. Shape of body and pectoral fins.



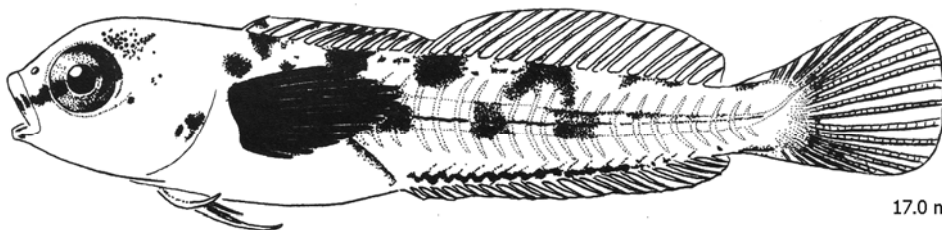
5.5 mm



6.3 mm



13.0 mm



17.0 mm

Plate 84- Early life history stages of *Lipophrys pholis*. Faria *et al.* (2002).

MERISTICS**Fins:**

Dorsal rays – XII-16-17
Anal rays – II+18
Pelvic rays – I+3
Pectoral rays – 13

Myomeres:

Total number –

LIFE HISTORY

Range: Eastern Atlantic: Along the coasts of France (Brittany), the Iberian Peninsula, Morocco, the Mediterranean and the Sea of Marmara southwards to Senegal, the Canary Islands and Madeira.

Habitat: demersal; marine.

Spawning season: winter and spring.

ELH pattern: Oviparous, demersal eggs and planktonic larvae.

MAIN REFERENCES

- Faria, C., F. Gil, V.C. Almada (2005). Ontogenic development of *Lipophrys trigloides* (Pisces: Blenniidae), with some notes of the spawning behaviour.
- Padoa, E. (1933-1956). Benniidae. *Uova, larve e stadi Giovanili di Teleostei: monografia elaborata con l'uso del materiale raccolto e svergiato da Salvatore Lo Bianco. Fauna e Flora Golfo Napoli Monogr.* 38: 720-745.

EARLY LIFE HISTORY DESCRIPTION**EGGS**

Capsule diameter – 1.3x0.86 mm
No. of oil globules -
Shell surface – smooth, hemispherical
Pigment -
Yolk -
Diameter of oil globules -
Diagnostic features -

LARVAE

Hatching length – 4.8 mm
Yolk-sac absorption – 4.8 mm
Flexion length –
Transformation length – 16-17 mm
Pigmentation - Newly hatched larva: heavily pigmented pectoral fins. Heavy peritoneal pigmentation (8-10 radial rows of melanophores). One or two melanophores at base of the pectoral fin and 8-14 melanophores on the last myomeres with 1-6 near the caudal tip. Pigmentation on brain, upper jaw and otocystic capsule. Late larva: pigmentation pattern maintained with an increase in the number and intensity of the postanal ventral pigmentation.
Diagnostic features – Pigmentation.

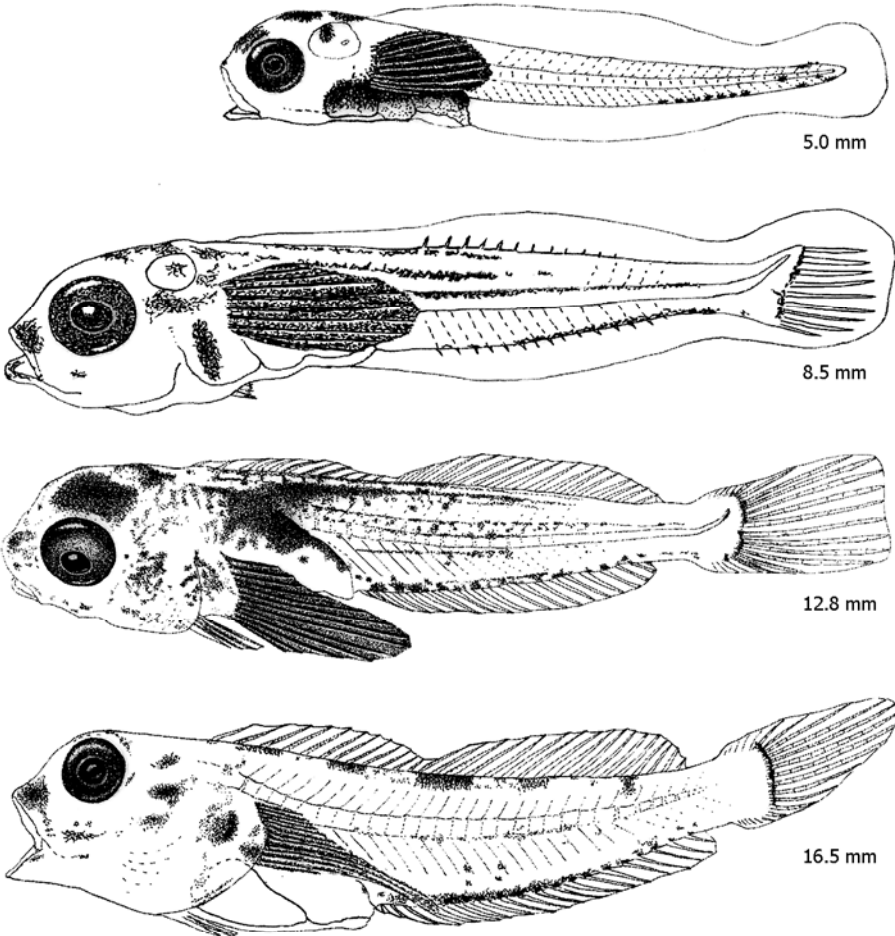


Plate 85- Early life history stages of *Lipophrys trigloides*. Faria *et al.* (2005).

BLENNIIDAE

Parablennius gattorugine (Linnaeus, 1758)

MERISTICS

Fins:

Dorsal rays – XIII+18-19
Anal rays – II+20
Pelvic rays – I+3
Pectoral rays – 20

Myomeres:

Total number –

LIFE HISTORY

Range: Northeast Atlantic: Atlantic coast from Ireland to Morocco; also in the Mediterranean Sea and the Sea of Marmora. This species is present only in mainland Portugal. Although older papers reported this species from the Azores and Madeira, the occurrences were misidentifications of *Parablennius rubber*.

Habitat: demersal; marine; depth range 3-32 m.

Spawning season: spawns throughout the whole year.

ELH pattern: Oviparous, demersal eggs and planktonic larvae.

MAIN REFERENCES

- Faria, C., F. Gil, V.C. Almada (submitted). Ontogenetic development of *Parablennius gattorugine* (Pisces: Blenniidae). *J. mar. biol. Ass. U.K.*
- Ford, E. (1922a). On the young of *Blennius ocellaris* L., *Blennius pholis* L., and *Blennius gattorugine*. *J. mar. biol. Ass. U.K.*, 12: 688-692.
- Fives, J.M. (1986). Blenniidae of the North Atlantic (revised). *Fich. Ident. Plancton*, 172: 6pp.
- Lebour, M.L. (1927). The eggs and newly hatched young of the common blennies from the Plymouth neighbourhood. *J. mar. biol. Ass. U.K.*, 14: 647-650.
- Padoa, E. (1933-1956). Blenniidae. *Uova, larve e stadi giovanili di Teleostei: monografia elaborata con l'uso del materiale raccolto e sveriato da Salvatore Lo Bianco. Fauna e Flora Golfo Napoli Monogr.* 38: 720-745.
- Russell, F.S. (1976). *The eggs and planktonic stages of British marine fishes*. Academic Press, London: 524pp.

EARLY LIFE HISTORY DESCRIPTION

EGGS

Capsule diameter – 1.6 mm
No. of oil globules - 0
Shell surface – smooth, hemispherical
Pigment -
Yolk - unsegmented
Diameter of oil globules -
Diagnostic features -

LARVAE

Hatching length – 4.9-5.2 mm
Yolk-sac absorption -
Flexion length –
Transformation length -
Pigmentation - Newly hatched larva: peritoneal pigmentation: Melanophores on snout and head. Unpigmented pectoral fin. Pigmented eyes. Late larva: ventral postanal row of 19-21 pigments (starting behind anus, melanophores regularly spaced due to its metamerical distribution). Black peritoneal pigmentation covering the dorsal side of gut. Notochordal row of melanophores starts at 8 mm.
Diagnostic features - Characteristic form (elongated appearance) – preanal length only one third or less of the total length. At 18 mm the rudiments of the tentacles may be seen in front of and over the eye. Pigmentation.

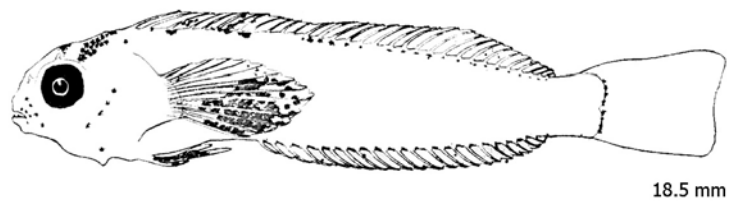
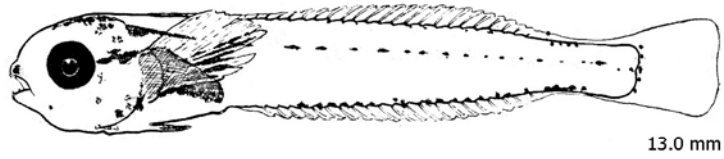
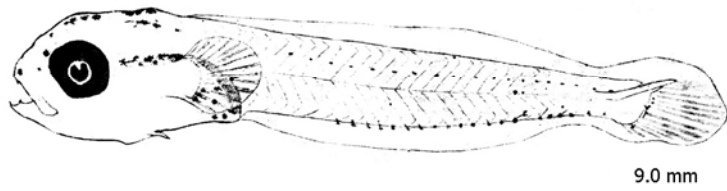
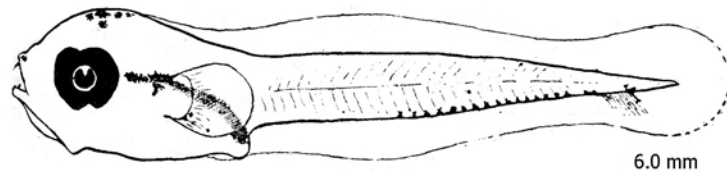


Plate 86- Early life history stages of *Parablennius gattorugine*. Ford (1922a).

BLENNIIDAE

Parablennius pilicornis (Cuvier, 1829)

MERISTICS

Fins:

Dorsal rays – XII+21
Anal rays – II+23
Pelvic rays – I+3
Pectoral rays – 14

Myomeres:

Total number – 38

LIFE HISTORY

Range: Eastern Atlantic: Spain and Portugal to Möwe Bay, Namibia. Also in the Mediterranean along the coast from Morocco, Algeria, Spain. Southwest Atlantic: Brazil and Patagonia, Argentina. Western Indian Ocean: Natal to Knysna in South Africa.

Habitat: demersal; marine; depth range 0–25 m.

Spawning season: spring and summer.

ELH pattern: Oviparous, demersal eggs and planktonic larvae.

MAIN REFERENCES

- Faria, C., F. Gil, V.C. Almada (2006). Ontogenic development of *Parablennius pilicornis* (Pisces: Blenniidae) in controlled conditions. *Scientia Marina*, 70 (4): 667-671.
- Olivar, P. (1986). Development and distribution of *Parablennius pilicornis* (Cuvier) larvae (Teleostei: Blenniidae) off Namibia. *S. Afr. J. mar. Sci.*, 4: 193-201.
- Olivar, P., J.-M. Fortuño (1991). *Guide to the ichthyoplankton of the Southeast Atlantic (Benguela current region)*. *Scientia Marina*, 55 (1): 1-383.

EARLY LIFE HISTORY DESCRIPTION

EGGS

Capsule diameter -
No. of oil globules -
Shell surface -
Pigment -
Yolk -
Diameter of oil globules -
Diagnostic features -

LARVAE

Hatching length – 3.0-3.2 mm
Yolk-sac absorption –
Flexion length – 10-11 mm
Transformation length -
Pigmentation – Newly hatched larva: heavy peritoneal pigmentation, pigmented eyes, small and unpigmented pectoral fins. One melanophore close to the anus and a characteristic row of postanal melanophores (*ca.* 30). Late larva: 6-7 pre-opercular spines visible from a length of 6 mm until metamorphosis. Pigmentation pattern maintained during development, with an increase in the number and intensity of melanophores at the ventral row, on liver, head and opercula.
Diagnostic features – Characteristic pigmentation. Small preanal length (25-33 % of total length) from the earliest stages to juveniles. Presence of pre-opercular spines from a length of 6 mm until metamorphosis.

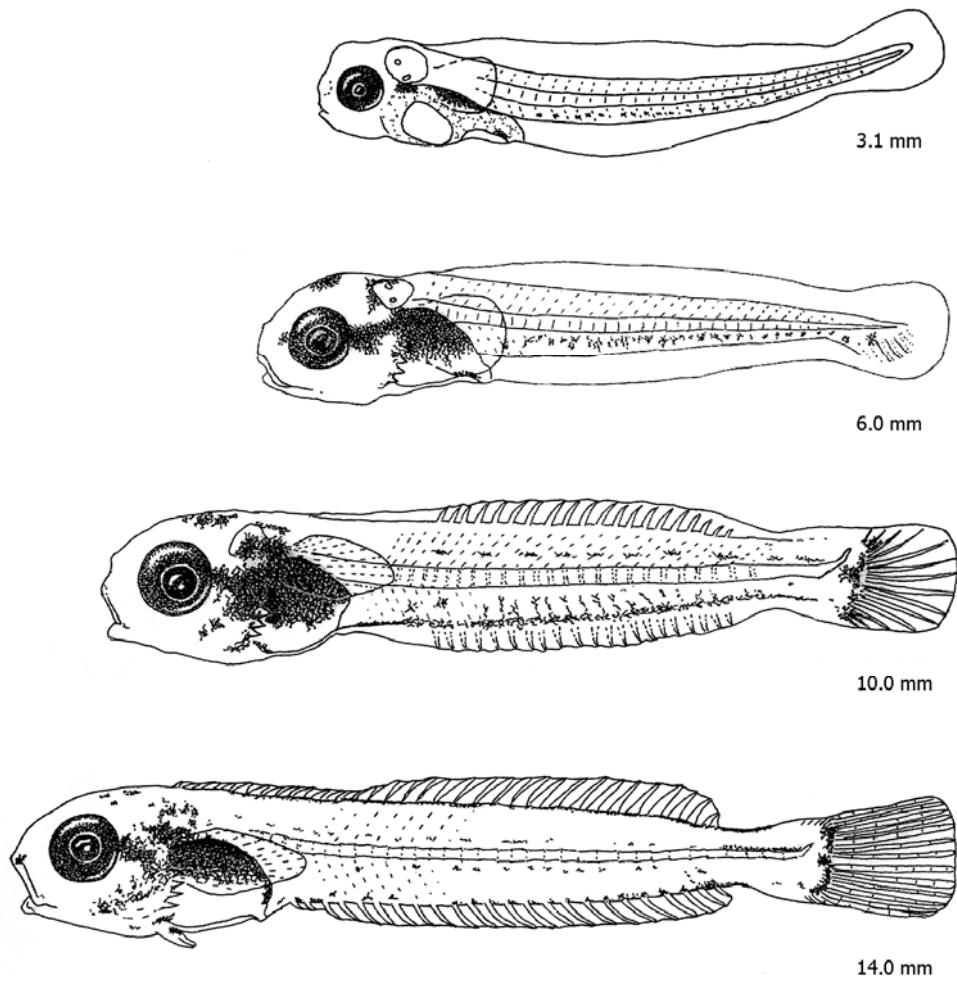


Plate 87- Early life history stages of *Parablennius pilicornis*. Faria *et al.* (2006).