Poecilopsetta beanii (Pleuronectidae): A new record for the East Atlantic

by

Jørgen G. NIELSEN (1) & John CASEY (2)

RÉSUMÉ. - Première capture de *Poecilopsetta beanii* (Pleuronectidae) en Atlantique oriental.

Un spécimen (83 mm de longueur standard) de *Poecilopsetta beanii* (Goode, 1881) a été capturé au chalut à 120 miles marins au sud de l'Irlande (49°31.14'N, 11°05.42'W). C'est la première capture de cette espèce en dehors de l'Atlantique occidental où elle est connue depuis la Nouvelle-Angleterre jusqu'au golfe du Mexique. Les larves pélagiques se métamorphosent normalement à une longueur de 30 mm, il semble donc peu probable que la phase pélagique soit suffisamment longue pour permettre la traversée de l'Atlantique. C'est pourquoi il est probable que cet exemplaire ait été transporté dans l'eau d'un ballast de navire.

Key words. - Pleuronectidae - *Poecilopsetta beanii* - ANE - New Record.

Between the mid-1980's and 2003, the Centre for Environment, Fisheries and Aquaculture science (CEFAS), has carried out an annual bottom trawl survey in the Celtic Sea, Bay of Biscay and Western approaches to the English Channel (ICES Divisions VII e-J, and VIIIa,b). The survey took place during March each year using a Portuguese high-headline bottom trawl fitted with polyvalent doors, 14-inch rubber bobbins on the ground rope and a bunt tickler chain. The survey was conducted aboard the Research Vessel "Cirolana" until 2002, and thereafter aboard the Research Vessel CEFAS "Endeavour".

During the 1995 survey, a single, unusual flatfish was caught about 120 nautical miles south of Ireland on the Goban spur (49°31.14'N, 11°05.42'W) at a depth of 200 m. It was caught together with a mixture of the following fish species: *Argentina sphyraena, Arnoglossus imperialis, Arnoglossus laterna, Capros aper, Eutrigla gurnardus, Gadiculus argenteus, Helicolenus dactylopterus, Lepidorhombus boscii, Lepidorhombus whiffiagonis, Lophius budegassa, Melanogrammus aeglefinus, Merluccius merluccius, Microchirus variegatus, Scomber scombrus, Scyliorhinus canicula, Trachurus trachurus,* Gobidae spp.

The specimen has the eyes on the right side, no lateral line on the blind side and the dorsal fin originates above the eyes. This combination of characteristics places the specimen in the subfamily Poecilopsettinae, within the Pleuronectidae. The lack of prolonged rays in the dorsal and ventral fins and the absence of a tentacle on each eye distinguish it as belonging to the genus *Poecilopsetta*.

The genus *Poecilopsetta* is widely distributed with 13 species in the Indo-West Pacific, from Hawaii to South Africa, and two species in the West Atlantic from New England to northern South America (Froese and Pauly, 2006). A similar distribution has been reported for the ophidiid genus *Neobythites* (Nielsen, 2002), with eight species in the western Atlantic, and 42 species from South Africa to the west coast of Mexico. The genus *Poecilopsetta* is not known from the eastern Atlantic despite the fact that the Northeast Atlantic continental shelf is intensively fished.

Figure 1. - *Poecilopsetta beanii*, SL 83 mm. **A**: Eyed (right) side; **B**: Blind (left) side. ***[A** : Face oculée (droite). **B** : Face aveugle (gauche).]*

Meristic characters. - The specimen, an unripe adult, has a standard length (SL) of 83 mm; rays in dorsal fin 63, caudal fin 18, anal fin 52 and in right and left pectoral fin respectively 10 and 8 rays, total vertebrae 40 (8+32) with ural elements counted as one, ca. 80 lateral line scales, teeth in 1-2 rows.

Morphometric characters in % of standard length. - Length of head 20.5, largest depth of body 34.5, upper jaw length 9.0, horizontal diameter of eye 8.2, pectoral fin length of eyed side 8.1.

Coloration. - Eyed side with black eyes and peritoneum, caudal fin with black band proximally and two black spots halfway to tip, several dark blotches in a row on dorsal and anal pterygiophores and a number of faint dark blotches on body. Blind side with several dark blotches evenly distributed over the body and with the dark eyes and the two spots on anal fin showing through.

The narrow body (greatest depth 34.5% SL), the many lateral line scales (ca. 80), ctenoid scales on eyed and cycloid scales on blind side and the coloration show that the specimen belongs to *Poecilopsetta beanii* (Goode, 1881). It has been previously reported only from the western Atlantic from New England to the Gulf of Mexico. It is known to reach about 100 mm in SL.

How did this specimen find its way to the eastern Atlantic? According to Dannie A. Hensley, Puerto Rico (pers. comm.), the pelagic larvae of the western Atlantic *Poecilopsetta* species, metamorphose and enter their demersal phase, at a length of about 30

(1) Zoological Museum, Universitetsparken 15, DK 2100, Copenhagen Ø, DENMARK. [jgnielsen@snm.ku.dk]
(2) Centre for Environment, Fisheries and Aquaculture Science, Lowestoft Laboratory, Pakefield Road, Lowestoft, NR33 0HT, UK.

mm. Other authors (Hoshino *et al*., 2000) listed size of the transformation larvae of some species of *Poecilopsetta*: 11.7-36.0 mm SL in *P. beanii* (Evseenko and Suntov, 1993), 29.0 mm SL in *P. hawaiiensis* (Ahlstrom *et al*., 1984). The larvae of *Poecilopsetta* grow to rather larger size than those of other pleuronectids and other fish groups. Nevertheless it seems unlikely that the pelagic phase is long enough to permit passive drift of larvae across the Atlantic by Northern Equatorial Current and Northern Atlantic Current. We suggest that the most likely explanation is transportation through ships' ballast water.

The specimen is deposited in the Natural History Museum, London (catalogue number BMNH 2000.8.1.1.)

REFERENCES

AHLSTROM E.H., AMAOKA K., HENSLEY D.A., MOSER H.G. & B.Y. SUMIDA, 1984. - Pleuronectiformes: Development. *In:* Ontogeny and Systematics of Fishes (Moser H.G., Richards W.J., Cohen D.M., Fahay M.P., Kendall A.W., Jr. & S.L. Richardson, eds), pp. 640-670. American Society of Ichthyology and Herpetology, Spec. Publ.

EVSEENKO S.A. & A.V. SUNTOV, 1993. - Early stages of development in the flounder genus *Poecilopsetta* (Pleuronectidae) from the Atlantic, Indian, and western Pacific Ocean. *Vopr. Ikhtiol*., 33: 528-538.

FROESE R. & D. PAULY, 2006. - www.fishbase.org, version Apr. 2006.

HOSHINO K., AMAOKA K. & P. LAST, 2000. - Description of transformation larvae and a juvenile of the dextral flounder, *Poecilopsetta praelonga* (Pleuronectidae, Poecilopsettinae) from the northwestern waters of Australia. *Ichthyol. Res*., 47(3): 263-270.

NIELSEN J.G., 2002. - Revision of the Indo-Pacific species of *Neobythites* (Teleostei, Ophidiidae) with 15 new species. *Galathea Rep*., 19: 5-107.

Reçu le 19 octobre 2006.
Accepté pour publication le 30 avril 2007.