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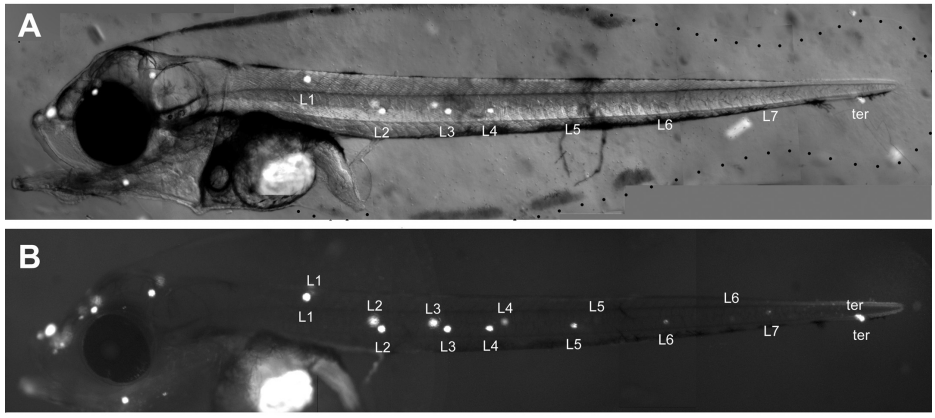
SUPPLEMENTARY MATERIAL

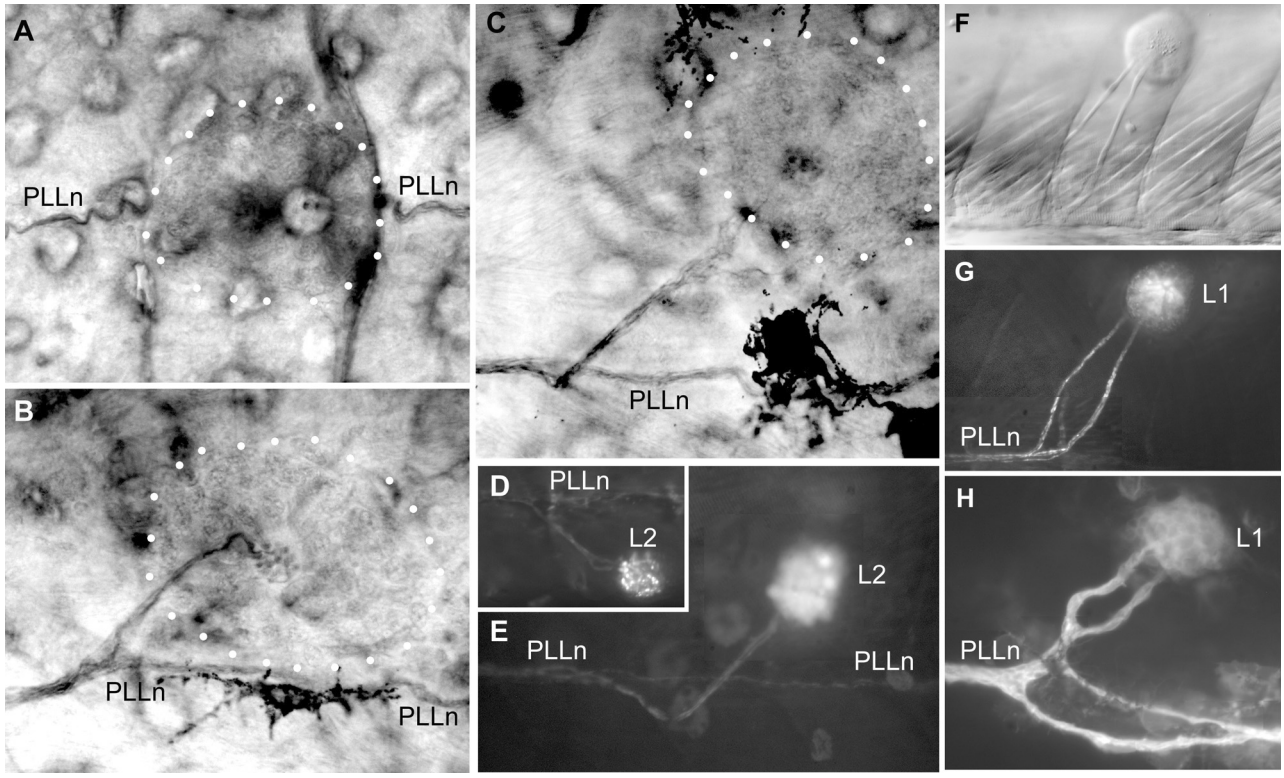
corresponding to:

Development of the posterior lateral line system in *Thunnus thynnus*, the atlantic blue-fin tuna, and in its close relative *Sarda sarda* (bonito)

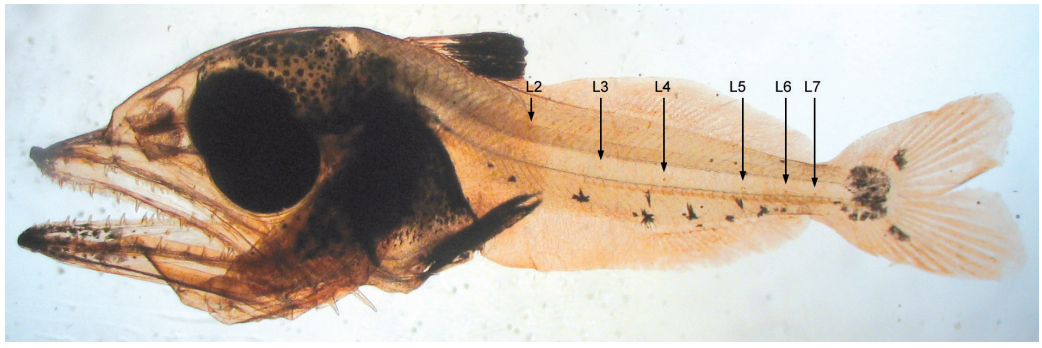
ALAIN GHYSEN, KEVIN SCHUSTER, DENIS COVES, FERNANDO DE LA GANDARA, NIKOS PAPANDROULAKIS and AURELIO ORTEGA



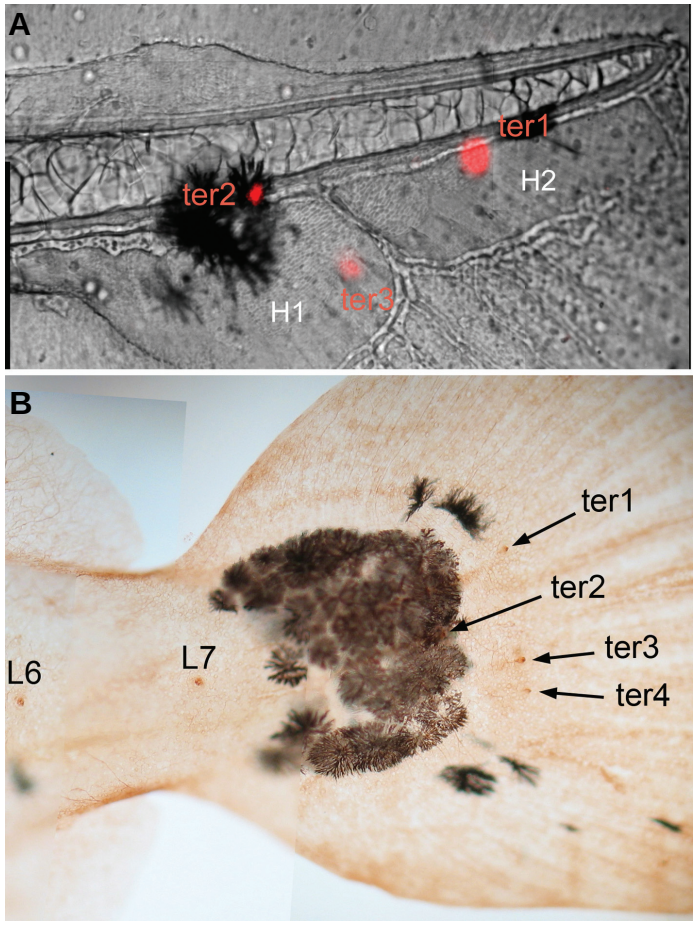
Supplementary Fig. 1. Pattern of the embryonic posterior lateral line (PLL) in a 3 dph *Sarda* larva. (A) *Fluorescence and bright field pictures have been combined to illustrate the position of the neuromasts on the body.* **(B)** *Only the fluorescence image is shown to illustrate the differences between the two sides of the same larva.*



Supplementary Fig. 2. Migration and innervation of posterior lateral line (PLL) neuromasts. (A-C) *Dorsal migration of L1 in anti-tubulin labeled hatch day* Thunnus *embryos. The number of hair cells is 2 in neuromast A, and around 8-10 in B and C.* **(D,E)** *Ventral-then-dorsal migration of neuromast L2 in 3dph* Thunnus *(D) and 7dph* Sarda *(E) embryos. DiAsp taken up by the hair cells is transmitted to the afferent axons, allowing one to see the path followed by L2 in panel E.* **(F,G)** *Nomarski and fluorescence view of a 3dph* Sarda *embryo, illustrating the splitting in two fascicles of the nerve branch innervating L1.* **(H)** *DiI labeling of the PLL nerve in a 4dph* Thunnus *larva. DiI was applied to the PLL nerve between the ganglion and L1. Nerve splitting in panels E-H may be correlated to the existence of two classes of afferent neurons that innervate anteriorly and posteriorly polarized hair cells respectively (Nagiel* et al.*, 2008, Faucherre* et al.*, 2009). PLLn, posterior lateral line nerve.*



Supplementary Fig. 3. Two week-old, 9 mm *Sarda* larva labeled with anticetylated tubulin.



Supplementary Fig. 4. Larval terminal pattern. (A) *Position of ter2 and ter3 relative to the hypural plates in a 9dph, 8.3mm* Sarda *larva. ter3 has migrated away from ter2, reminiscent of the situation in zebrafish, where in some cases the ventral neuromast T3 is not one of the ter neuromasts of the embryonic line, but an accessory neuromast budded off by the penultimate neuromast (H. Wada, pers. comm.). Note that ter4 has not formed yet, although the larva is slightly larger than the one in Fig. 5F, indicating some variability in the dynamics of terminal patterning. H1, H2: hypural plates.* **(B)** *Larval pattern in a 19dph, 12.5mm larva. The pattern has remained unchanged, in spite of major changes in caudal fin morphology.*

NOTE: For references, see main article.