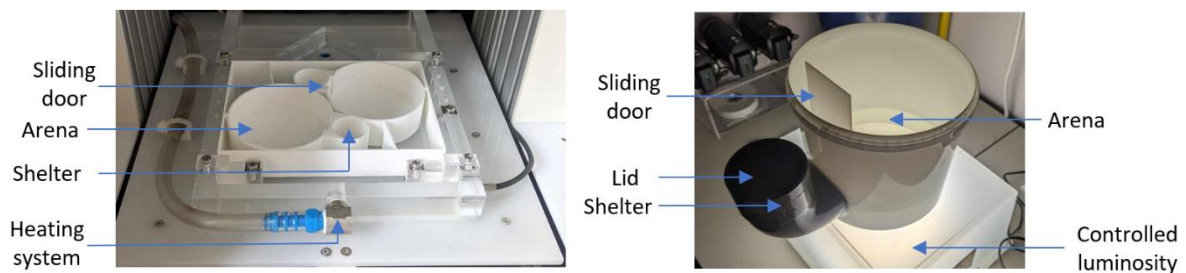


SUPPLEMENTARY DATA

S1: Outcome and number of individuals of the 35 fish used.

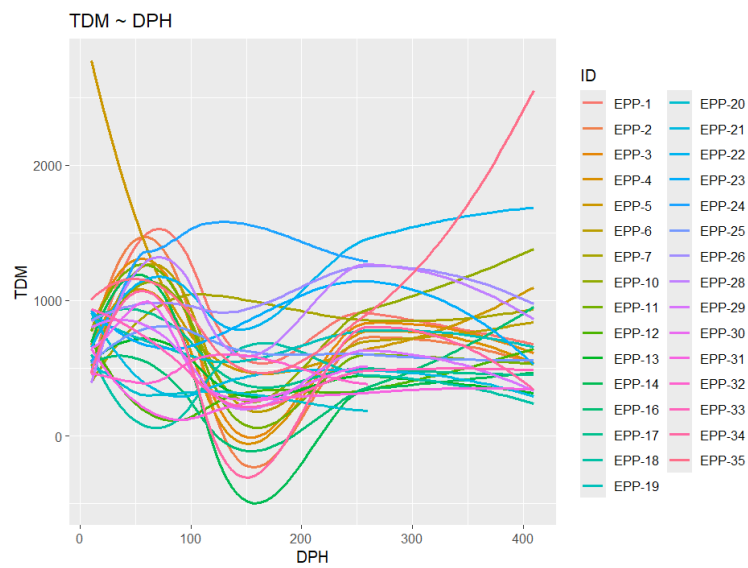
Outcome	Nb. of individuals
Survived to the last measured stage – included	28
Mortality between 260 and 410 DPH – included	4
Mortality between 110 and 260 DPH – excluded	2
Mortality before 60 DPH – excluded	1
Outlier (mean TDM of EPP9 is 5150 cm, mean of 32 included fish is 738 cm) – excluded	1

S2: Arenas for the first (10 DPH) and subsequent (60 to 412 stages).



The device on the left was 3D printed in the laboratory. This apparatus was scaled to accommodate the small body size of early juveniles and was compatible with the Danio Vision system (Noldus Information Technology, Wageningen, Netherlands). The arena measured 6 cm in diameter and the shelter 2 cm in diameter. For the four subsequent developmental stages, behavioral assays were conducted using a larger device with a 19 cm diameter arena and a 9 cm diameter shelter.

S3: Total Distance Moved according to Day Post Hatching.



For the 32 fish included, Total Distance Moved according to Day Post Hatching. In view of the curves obtained from the raw data, we decided to include splines in the Bayesian models.

S4: Increasing complexity models and associated priors used to assess ontogenetic stability and plasticity.

For all models, *iter* = 4000, *warmup* = 2000, *chains* = 4, *cores* = 4, *control* = *list(adapt_delta = 0.995, max_treepdepth = 15)*, *save_pars* = *save_pars(all = TRUE)*

Priors	Model
<pre>priors_m1 <- c(prior(normal(log(700), 0.25), class = "Intercept"), prior(gamma(6, 1.2), class = "shape"))</pre>	<pre>m_1 <- brm(TDM ~ 1, family = weibull(), prior = priors_m1)</pre>
<pre>priors_m2s <- c(priors_m1, prior(normal(0, 0.15), class = "b"),</pre>	<pre>m_2s <- brm(TDM ~ s(DPH_s, k = 3), family = weibull(),</pre>

prior(normal(0, 0.4), class = "sds"))	prior = priors_m2s)
priors_m3s <- c(priors_m2s, prior(exponential(2.5), class = "sd"))	m_3s <- brm(TDM ~ s(DPH_s, k = 3) + (1 ID), family = weibull(), prior = priors_m3s)
priors_m3s	m_4s <- brm(TDM ~ s(DPH_s, k = 3) + (DPH_s ID), family = weibull(), prior = priors_m3s)
priors_m3s	m_5s <- brm(TDM ~ s(DPH_s, k = 3) + (DPH_s ID), family = weibull(), prior = priors_m3s)