**Abstract Submission Form**

**Australian Marine Science Conference 2017**

**Connections through shallow seas**

**Sunday, 2nd July - Thursday, 6th July**

**Darwin, NT, DoubleTree by Hilton Esplanade & Darwin Entertainment Centre**

**Abstract must not exceed 350 words (excluding ‘title’)**

**Title (max 115 characters):**

Putting the bio(logy) back into biophysical connectivity modelling

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**Nominated session (symposium or general session): Choice 1 –**

G1: Marine Fundamentals

**Nominated session (symposium or general session): Choice 2 –**

S19: Systems science perspectives

**Abstract (350 words)**

Biophysical connectivity modelling has been a popular tool amongst marine researchers in the last twenty years for estimating connectivity patterns. The outputs of these models have been used to assess metapopulations dynamics to aiding design on marine protected areas. However, the biological models have not kept pace with the physical models. While physical models have been improving, many studies investigating the connectivity of pelagic marine larvae still implement the larvae as passive particles in their models. We reviewed the current state of connectivity driven biological models in the literature (2010-2016) to compared how the implemented biology affects the output of these biophysical models. In addition, we discuss how modelling different movement behaviours of pelagic ichthyoplankton influences connectivity patterns, using results from our theoretical study. These outcomes allow us to understand both what behaviours to prioritise including in future biophysical connectivity modelling studies, and where to focus our efforts in finding unknown information about biological traits of the species we want to model.