Appendix S1 (Supporting information)

Purification of blue pigment from Acartia fossae

We made an attempt to purify the blue carotenoid protein from *A. fossae* using method described by Bulina et al., 2004. The blue *A. fossae* were kept in filtered seawater at 4°C for 7 days (the blue pigment was stable and retained blue color) to allow significant pigment to be extracted into the solution. After chloroform-extraction the aqueous fraction was subjected to ammonium sulfate fractionation and blue precipitate was dissolved in phosphate buffered solution (PBS). We could determine the size of the blue pigment to be around 20-30 KDa after size-exclusion chromatography which agrees with the predicted sizes of the identified transcripts (e.g. comp54867_c0_seq1, predicted MW 22.6 KDa). The spectral maxima absorbance of the same corresponded to the carotenoproteins observed in pontellids in earlier study (Herring, 1965).

Reference:

Bulina ME, Lukyanov KA, Yampolsky IV, *et al.* (2004) New class of blue animal pigments based on Frizzled and Kringle protein domains. *Journal of Biological Chemistry* **279**, 43367-43370.