

## Metadata3

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### Copepods' true colors: astaxanthin pigmentation as an indicator of fitness

Journal name: Ecosphere

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- Description of:

#### **Data3. Abiotic and biotic variables effects on copepod astaxanthin concentrations from the literature**

This dataset gathered all studies classified as “forcing variables” (column study\_type, Data1) and show the type of correlation between forcing variables astaxanthin concentration (positive, none, negative).

- Column details:

**study, year, order:** name of authors, year of publication, and we added the column “order” with letters a, b or c if authors published several articles in a year

**condition:** environment of the experiment

mesocosm

in vitro

in vivo

#### **forcing\_variables:**

diet\_composition (= *diet diversity*)

diet\_quantity (= *diet quantity*)

feeding\_activity (= *feeding activity of the copepod*)

gut\_content (= *increasing gut content fullness*)

diurnal\_variations (= *significant impact of daily cycle on pigmentation, no matter when the maximum is*)

UV\_radiations (= *exposure to UV radiations*)

natural\_light (= *exposure to natural light*)

removal of UV radiations (= *no more exposure to UV radiations*)

temperature (= *exposure to increasing temperature*)

latitude\_discrete (= *increasing latitude but discrete categories, such as temperate, sub-arctic, arctic*)

lake\_elevation (= *lake altitude above sea level*)

lake\_depth (= *depth of the lake where copepods were sampled*)

fish\_presence (= *exposure to fish presence*)

UV\_fish (= *exposure to UV radiations and fish at the same time*)

threat\_ratio (= *ratio between UV radiation exposure and predation*)

individual\_depth (= *depth of the copepod individual in vivo*)  
 copper (= *exposure to copper*)  
 UV\_radiation\_copper (= *exposure to UV radiations and copper at the same time*)  
 diet\_composition\_copper (= *exposure to various diet diversity and UV radiations at the same time*)  
 UV\_temp (= *exposure to UV and increasing temperature*)  
 UV\_-MAAs\_fish (= *exposure to UV and fish, no MAAs precursors available*)  
 UV\_+MAAs\_fish (= *exposure to UV and fish, with MAAs precursors available*)  
 darkness + starvation (= *starvation of individual in the dark*)  
 refuge (= *presence of zones protected from UV, linked to depth or algae*)  
 body\_weight (= *body weight of the individual*)  
 lipid\_content (= *lipid content of the individual*)  
 lipid\_content\_of\_eggs (= *lipid content of eggs*)  
 egg\_ratio (= *number of eggs by female*)  
 body\_length (= *body length of the individual*)  
 MAAs (= *MAAs precursors, possibility to synthesize MAAs*)  
 ice\_cover (= *ice cover*)  
 UV\_radiations\_+MAAs (= *exposure to UV and MAAs precursors available*)  
 zoo\_community\_composition (= *diversity of the community composition*)  
 nutrients (= *abundance of nutrients*)  
 preferred\_water\_mass (= *water mass of the individual*)  
 pH (= *pH of the water*)  
 alkalinity (= *alkalinity of the water*)  
 lignin\_like\_compounds (= *lignin like compounds in the water*)  
 dissolved\_oxygen (= *dissolved oxygen in the water*)  
 dissolved\_organic\_carbon (= *dissolved organic carbon in the water*)  
 dvm (= *diel vertical migration*)

**asta\_correlation:** sense of the correlation between the forcing variable and astaxanthin content:

positive (= *significant and positive relationship*)

none (= *non signification relationship*)

negative (= *significant and negative relationship*)

**confidence:** confidence level of the correlation we estimated according to statistics or methods used by the authors (see comments for more details):

high, medium or low

**comments:**

relevant information explaining how the correlation was established, or how confidence level was estimated