

## ***Interactive comment on “Growth and production of the copepod community in the southern area of the Humboldt Current System” by R. Escribano et al.***

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Dear Editor, The MS entitled Growth and production of the copepod community in the southern area of the Humboldt Current System by Escribano et al. presents very interesting and valuable data showing time-space variability of copepod abundance, biomass and production in the upwelling coastal area off central-south Chile.

Introduction and Discussion are well written, however the Methods and Results sections in relation to  $g$  calculations (2.2, 3.2) are not clear and need to be rewritten. In its present form the MS can not be properly evaluated and major revision would be required prior to its acceptance.

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Specific comments:

1.- According to the Introduction,  $g$  was assessed in Central/south Chile. However, from from the text (Methods 2.2 and Results 3.3) and Table 2, Figs. 6 and 7 it is not clear which of the  $g$  data presented are original from this work (i.e. 2004-2006 cruises plus St.18) or belong to published/unpublished previous studies. For example: - Table 2:  $g$  data seem obtained from references cited next to them. However, next to Escribano and McLaren (1999) ND is shown for  $g$ , despite in their work  $g$  data were published and those data seem also to be included in Fig. 6 (16.5°C). - Fig. 6, if data represented in this figure correspond to Table 2 (not clear in the MS) there are a few mismatches that need to be amended. E.g. *P. indicus* data at 13-14 °C are presented in the figure but not in the Table; same for *C. chilensis* at 16.5 °C, or *A. tonsa* at 13°C. - Fig.7,  $g$  data corresponding to North and South regions are shown, however no sampling was carried out during this study in northern Chile. - P3064, lines 5-10, the  $g$  values that you attempt to relate with temperature and body size are yours or from works cited in table 2? Please rewrite the text, table and figure legends to specify the origin of each set of data and how growth rates were calculated.

2.- Given that most of the Discussion is based on CP calculated based on  $g$  and CB, it is needed further information on the  $g$  calculations. - P3066, line 28, a mean value of  $g$  was calculated for each species but the data are not shown in the MS (in Fig. 7 there is more than one  $g$  for some species). Please add a table with all the mean values of specific  $g$  used for the CP calculations. - Also specify where the grand mean of 0.27 d<sup>-1</sup> comes from, and to which species has been applied.

3.- Fig. 4, in P3065, line 14 says that the two periods have the same number of days and months. However in fig.4 the first period comprises 17 months and the second 18 months. In addition, this division splits an upwelling season in two unequal parts which may lead to error in the interpretation. If the main aim is to observe variations in the length/strength of the upwelling season I suggest dividing the figure in 3 cycles. For example 1) from the beginning up to August 2005, 2) from there to August 2006, and

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3) the remaining data to the end of the wind time series.

4.- Fig. 13, clear and illustrating conceptual model. Please explain the green 'upwelling condition' shape in the figure legend, as it does not seem to match Fig.4. Also, in P3072, line 6, it would not seem that production is reduced but rather that the production is exported offshore. I suggest modifying this sentence to further explain this, maybe substituting 'a reduction in CP' by 'an increased export or loss by advection'. Was  $g$  for each species assumed to be constant through the study period?

Technical corrections:

P3062, line 23, amend (REFS). P3065, line 6, ...except in 'the' area around... P3067, line 14, change 'in the same years' by 'from 2005 to 2006'. P3069, lines 13-15, redundant sentence, please rewrite. P3069, line 28, Lopez not Lopes. P3070, line 11, do you mean 'It is important'?, if so delete 'not'. P3070, line 13, it may be good to add that the work does not consider mortality either. P3071, line 22-23, according to Fig. 4, upwelling lasted for 9, 8 and 11 months. Please change 'the second part of the time series' by '2006'. Table 2, several references in Table 2 are not listed in References. Also data of Adult *C. chilensis* at 18.5 °C have no reference related to them. Table 4, *C. patagoniensis* SD is ND? Do you mean zero? Fig. 4, arrows do not match cruise dates. Fig. 4, monthly means are not shown for all months. References, 10 references are cited but not listed in References, and 3 references are listed but not cited in the text.

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