

We would like to thank the reviewer for the comments. The [point-to-point responses \(in blue\)](#) to the [reviewers' comments](#) are listed below, and [the revised texts are displayed in red](#).

As the authors agreed in their response that they have no direct evidence about causal relationship between 2013-2014 ANCP decrease and phytoplankton community composition change and low plankton biomass, I demand the authors to delete any mentions that suggests causal relationship between these matters.

They have clearly detected 2013-2014 ANCP decrease simultaneous change in phytoplankton community composition and plankton biomass, but this never means by themselves that the latter is the cause of the former. It is also possible that the former cause the latter, and it's even more probable that the all of these findings is a results of single, not detected event (ca, GPP decrease).

Page 2, line 34

"it was most likely due to changes in plankton community composition"

=>this should be changed to like that:

"it was likely due to some biological processes rather than physical processes."

[This sentence has been changed as:](#)

["it was most likely due to the temperature-induced changes in biological processes."](#)

Page15, lines 314-316.

"The sharp decrease.....(Figure5a)." =>delete this sentence.

[This sentence has been deleted as suggested.](#)

Page 17, lines 351-353.

"We suggest that the low phytoplankton biomass observed in the 2nd year '2013-14, Figure 5a), and the observed change in phytoplankton community composition (figure 5c) are the most likely causes for the ANCP decrease."

=>should be changed to:

"We suggest that the change in GPP are the most likely causes for the ANCP decrease."

Here you made big jump: Your elimination-method based discussion had suggested that GPP decrease must be required to explain observed ANCP decrease, but NONE in your discussion suggested that the cause of GPP decrease is reduced Chla abundance and change in plankton composition. Again, I say that these two events can be a RESULTS of GPP decrease as well as ANCP decrease, not the cause of it.

[As mentioned by the reviewer, it is not appropriate to jump into the conclusion that one event is the cause of the other. So we change the first sentence of this paragraph as follows:](#)

["Having ruled out the above likely candidates, we suggest that the observed ANCP decrease is most likely linked to the changes in GPP \(e.g. low phytoplankton biomass observed in the 2<sup>nd</sup> year Figure 5a\) and phytoplankton community composition \(Figure 5c\)."](#)

Page 17, lines 363-368

"These changes in phytoplankton community composition could be ultimately in response to....."

=>should be changed to:

“Such change in GPP, as well as decreased Chla abundance and change in community composition could be ultimately in response to ....”

And the last part of this paragraph has been re-written as:

“These changes in GPP and phytoplankton community composition could be ultimately in response to the lack of micronutrients like iron (due to enhanced stratification from the “blob” that restricted the vertical supply), which has been shown to regulate phytoplankton biomass and composition in this high-nutrient low-chlorophyll region (e.g. Hamme et al., 2010; Marchetti et al., 2006), . Unfortunately, we do not have iron data available to confirm that at this time.”

page 18, line 384-385

“the ANCP decrease was most likely due to changes in phytoplankton abundance and community composition after the “Blob” entered the area.

=>should be changed to such as:

“the ANCP decrease, as well as change in Chla abundance and phytoplankton composition, was most likely due to changes in GPP after the entry of the “Blob.” The ultimate cause of such GPP decrease, however, is not be able to specified by our analysis.”

The last sentence has been re-written as:

“Our analysis showed that the ANCP decrease, as well as changes in phytoplankton abundance and community composition, was most likely due to changes in GPP after the “Blob” entered the area. These changes could be ultimately in response to the lack of micronutrients like iron during the “Blob” period. However, the ultimate cause cannot be specified by our analysis at this time.”