

SCRS/2011/042

Movement of Atlantic bluefin tuna toward the Strait of Gibraltar inferred from Japanese longline data

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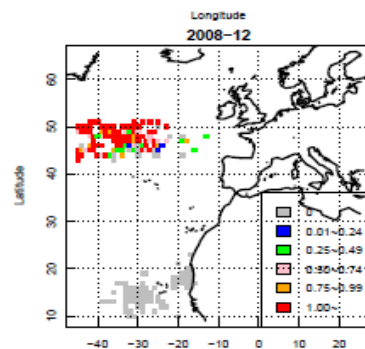
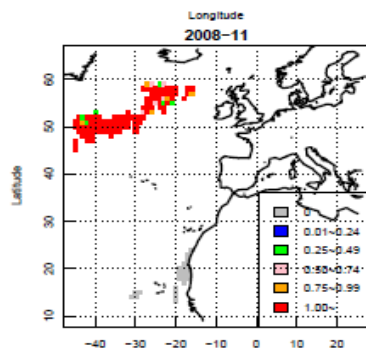
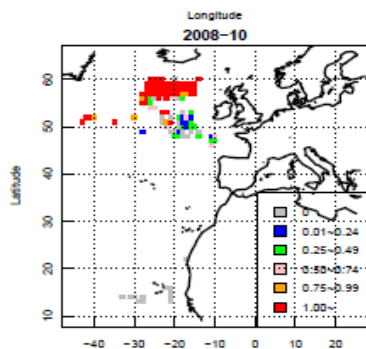
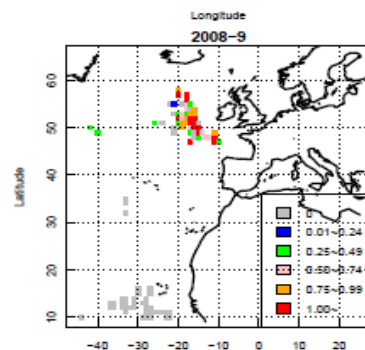
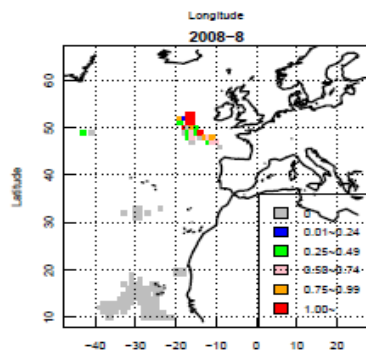
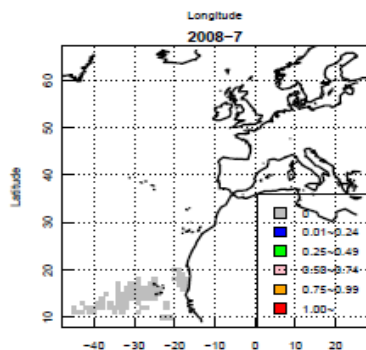
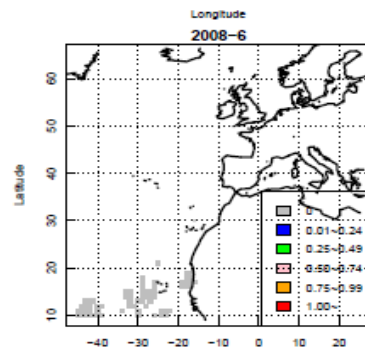
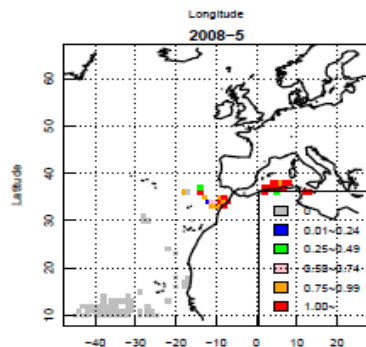
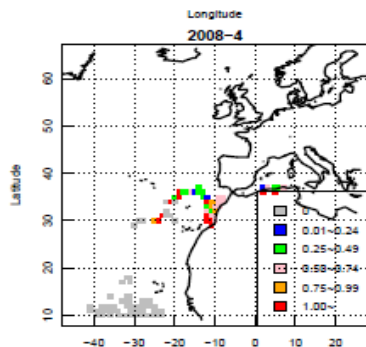
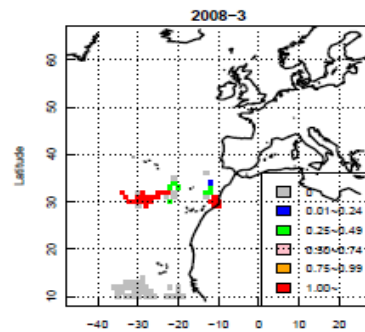
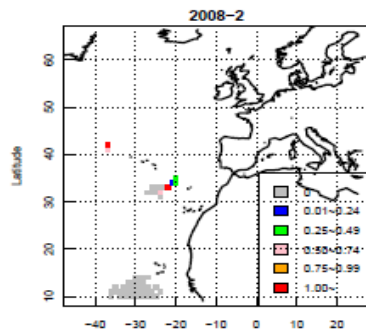
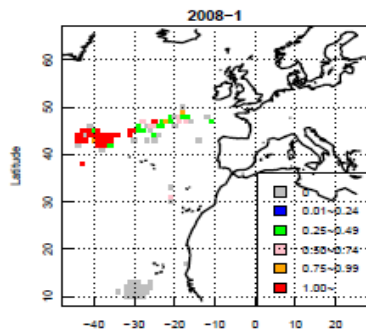
Objectives of this paper and data used

- Investigate how trap data relate to oceanic fishery using the Japanese LL data with respect to migration, size of fish taken and abundance index
- Japanese LL: nominal CPUE(no. fish/1000 hooks) by month and 1degree squares and size measurement data in the water off Strait of Gibraltar
- Figures of PSAT tracking by Block et al (2005)

Characteristics and Limitations of the data used

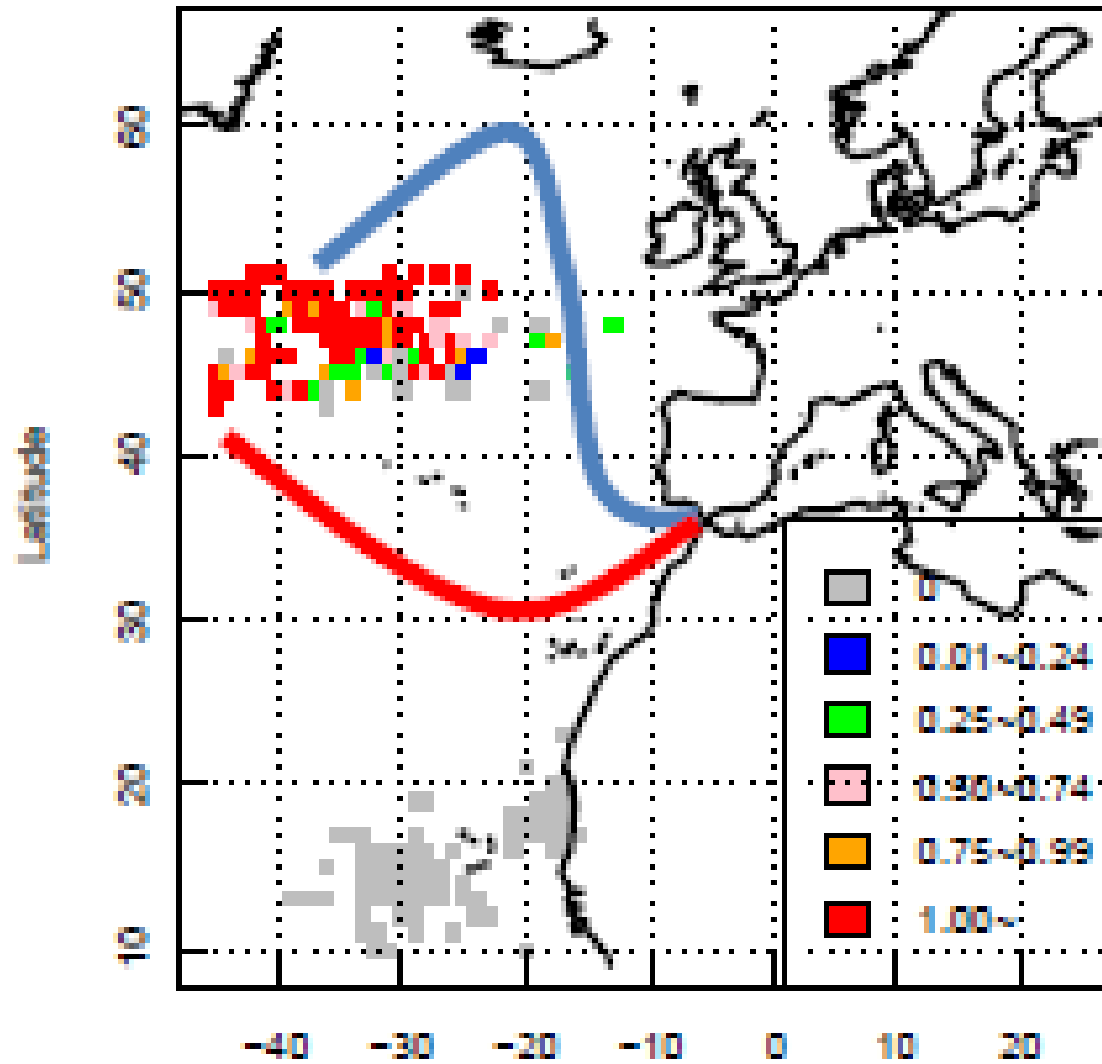
- **Japanese LL:**
Relatively large time/area coverage but no proof of movement of the fish although the fishery consistently chasing bluefin
- **PSAT tracking:**
Small No. of observations but actual movement of the fish

How those compare?

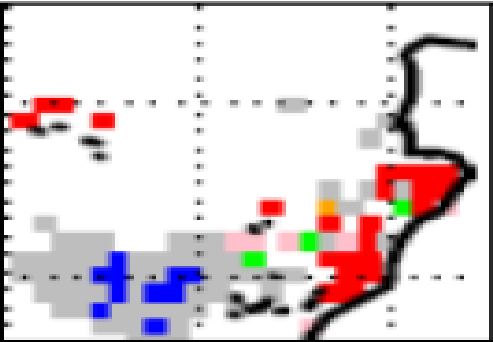


Longitude

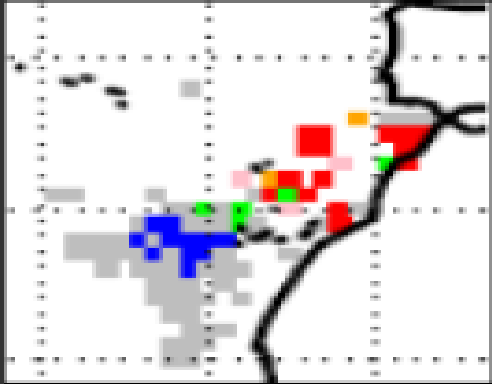
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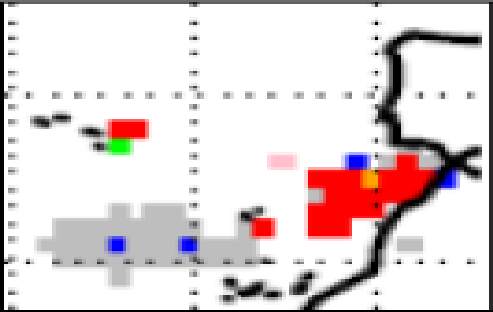
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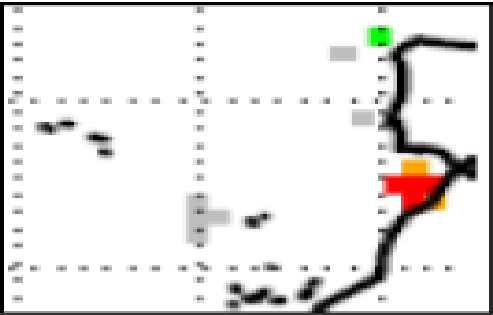
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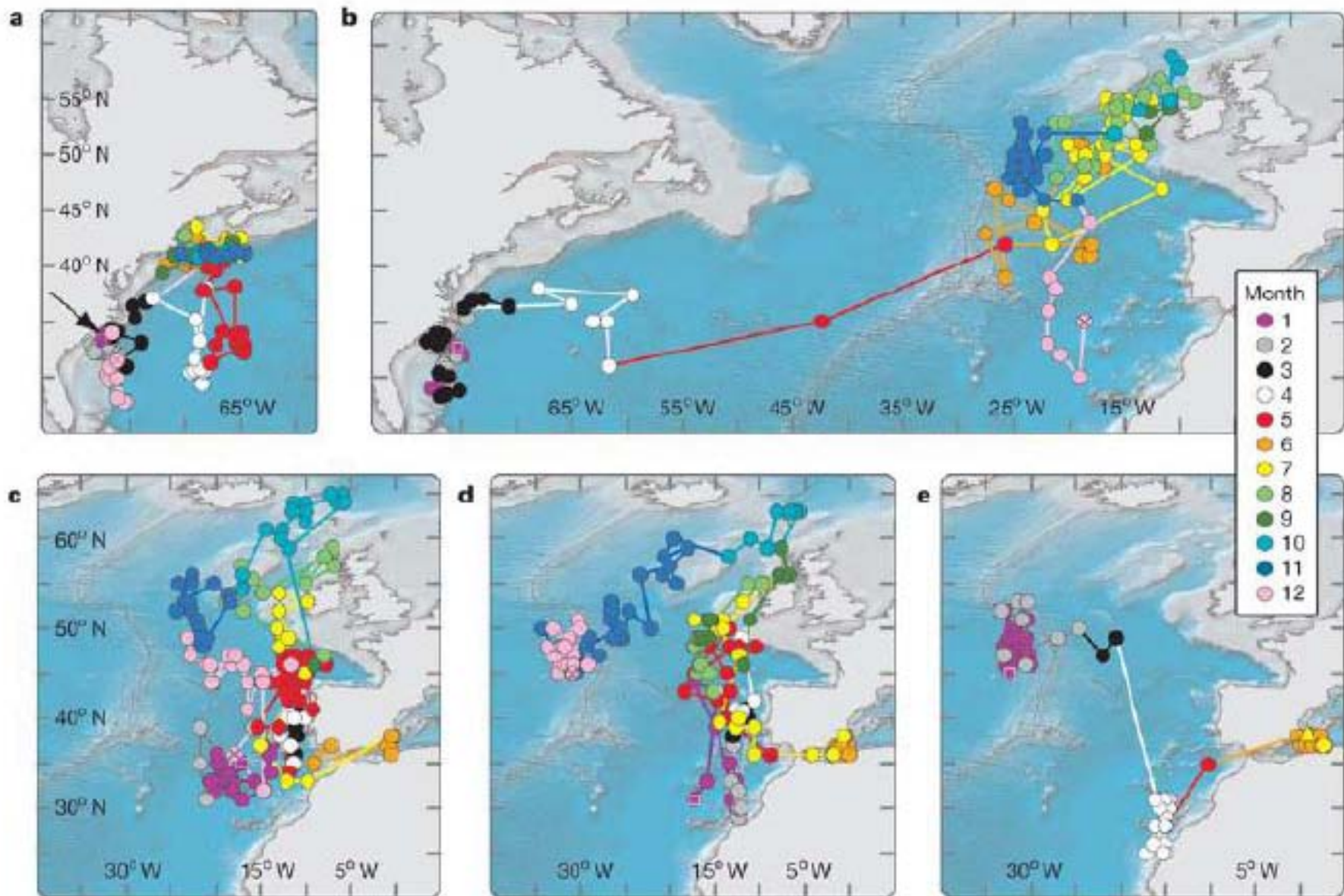
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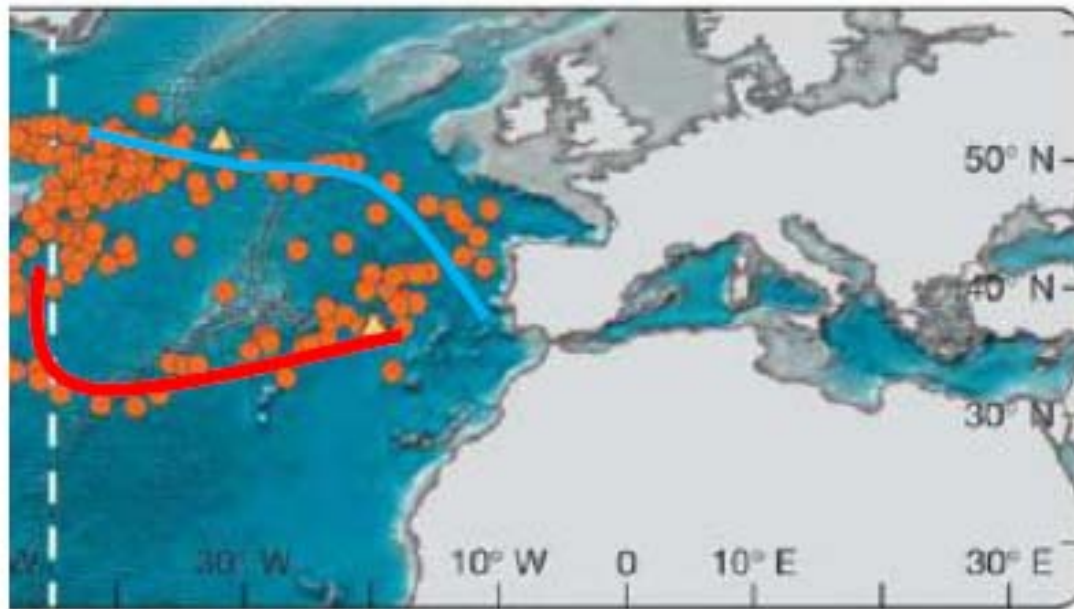


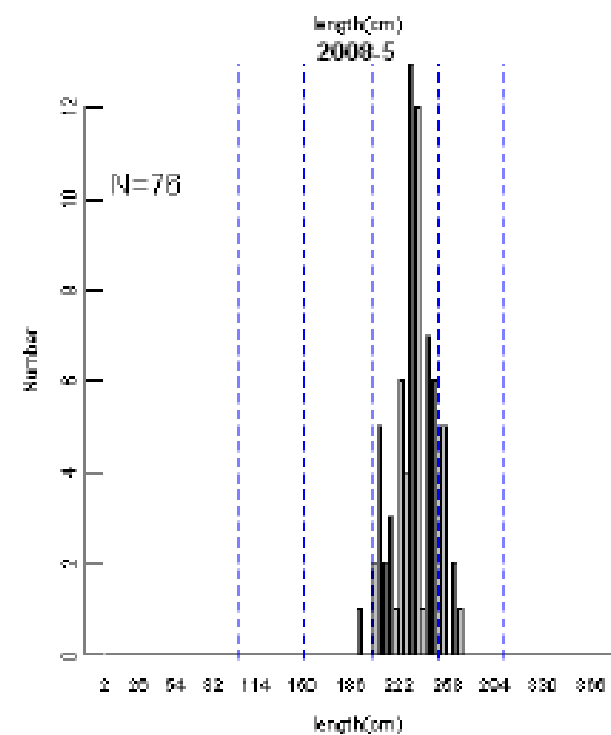
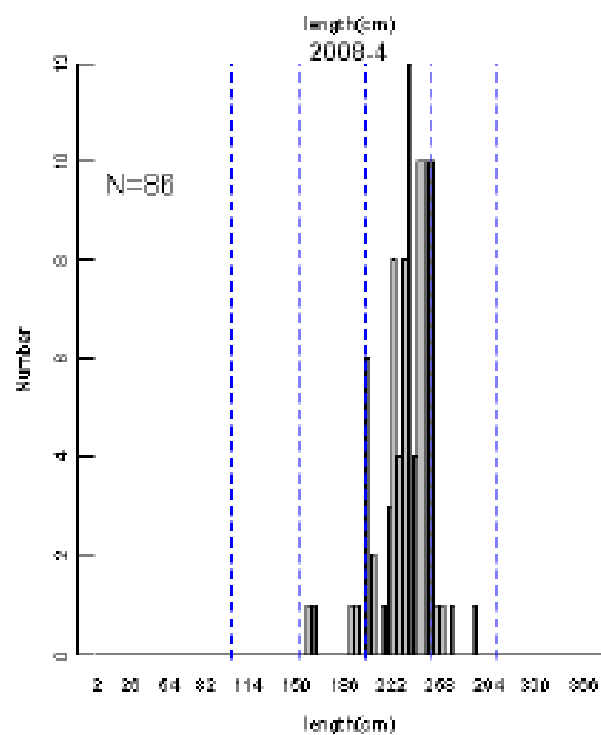
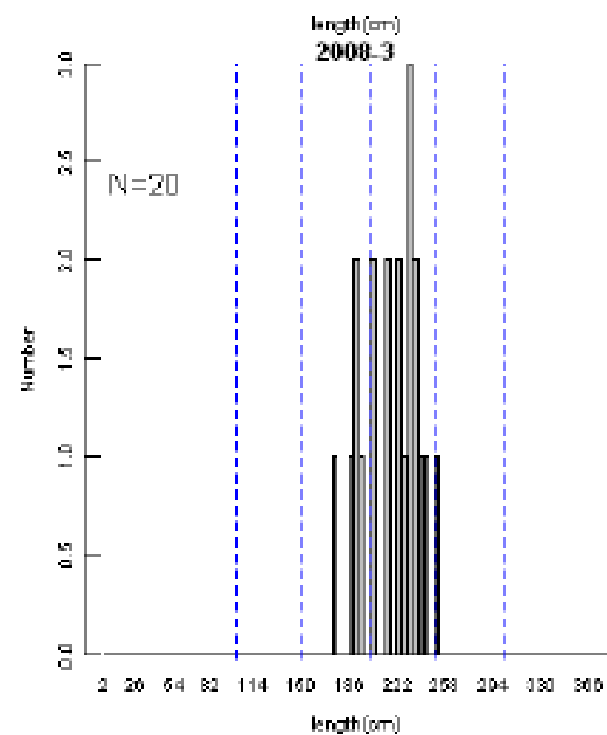
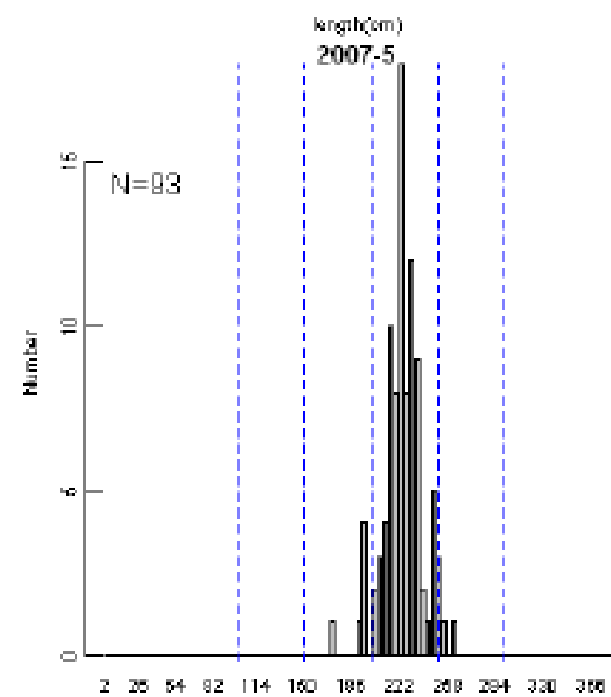
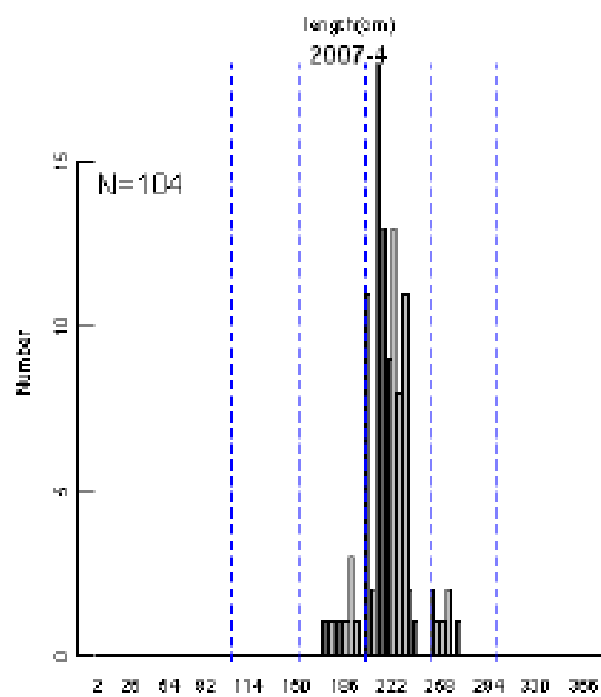
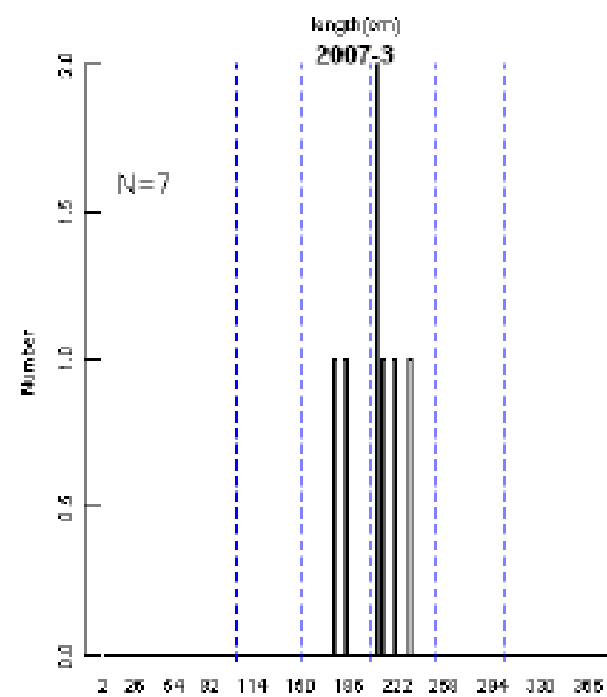
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Two working hypotheses for movement to Strait of Gibraltar

- Approaching from south along Mauritania and Moroccan coast with some from north along Iberian coast
- Approaching from north along Iberian coast with some significant fraction from south along Mauritanian and Moroccan coast

Conclusion

- The two kinds of information seem to give a fairly good agreement on general migration
- Sizes of bluefin taken by the Japanese and the traps show similar range of fish length.

Those two would be reasons why CPUE of large adult ABFT for the Japanese LL and the traps indicates more or less the similar trend despite of large differences in time area coverage of their fisheries