



# BLACK SEA4FISH

## PRESENTATION SERIES

### Black Sea Rapa whelk survey protocol

by

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### Questions and answers session

**1. Erdinç Güneş, Turkey:** Mr. Gunes mentioned that during a working group held in Trabzon last year, Ukrainian scientists commented that during an experimental beam trawl survey carried out in Ukrainian waters, there were high amount of turbot juvenile specimens caught as bycatch. What is the situation in Turkey?

**Murat Dagtekin, Turkey:** In the South Black Sea region, the reported quantities of turbot as bycatch are low. Most probably, this is due to the different habitats structure in Ukrainian and Turkish areas.

**2. Ali Gucu, Turkey:** Is imposex issue a significant problem in the Black Sea? Should we worry about this problem?

**Murat Dagtekin:** The imposex is a phenomenon. An increasing trend is observed of rapa whelk specimens having imposex characteristics. Most probably, this is due to high reproduction rates of the species in the Black Sea region.

**3. Giuseppe Scarella, Itlay:** Concerning the rapa whelk survey, how the survey design was decided – in terms of stations allocation in the survey area. Is these are random stratified stations or it is a systematic survey?

**Murat Dagtekin, Turkey:** There are 3 strata planned to be examined during the survey:

- 10 - 15 m
- 15 - 25 m
- 25 - 35 m

For the Eastern part of the BS there are problem with the waters shallower than 10 m. In this area, the samples will be collected by commercial fishers (divers).



**Nazli Demirel, Turkey:** It is planned the rapa whelk survey to cover over 300 stations in the Black Sea coastal zone, as the stations are allocated according to the rapa whelk survey protocol.

**Giuseppe Scarella, Italy.:** There is a published by GFCM bottom trawl technical guideline protocol for the Mediterranean. It would be good before implementing the survey (allocation of the stations, number of stations in each strata, the gear and ect.) in the Black Sea, the BS experts to go through this guideline for some advices. Also in the North Adriatic, for rapa whelk collection (it is mostly as bycatch), some fishers started to use another gear – big basket traps. The latter cause less damage on the sea floor than the beam trawlers. If needed, this design could be provided to the BS group.

**Murat Dagtekin, Turkey:** In Black Sea, one of the methods for collecting rapa whelk is the diving method (summer season). Another practice is the so-called pot fishery, but it is not preferred by the Turkish fishers.

**Ali Gucu, Turkey:** Concerning the GFCM bottom trawl technical guideline, the BS rapa whelk protocol was constructed entirely on it. The technical guideline for the Mediterranean was discussed very detailed by the Black Sea experts – line by line, and where needed was modified for the needs of the Black Sea specifics.

**4. Serhii Snihirov, Ukraine:** If the top (apex) of the shell is destroyed, how to measure the height (length) of an individual?

**Ali Gucu, Turkey:** These specimens should be discarded. They should not be measured, because they cannot provide realistic information about the size structure of the catch.

**5. Ali Gucu, Turkey: Do we always need to check the presence of orange spawning marks occurring on the inner surface?**

**Bogdan Hulak, Ukraine:** It is not possible to check all orange strips in the inner surface of the shell. This pigmentation is visible only on the edge of the rapa whelk's shell, where you can see intensive color strips. The orange strips are measure of the spawning marks. If there is a mark on the shell, very close to the edge, but in the inner surface, there is no orange pigment - it is a false mark. It is impossible to invest the entire surface of the shell because the orange strips are not visible. In the older specimens, the entire inner surface is orange, because the orange strips are disposed very close to each other and thus format only one orange area, where some very intensive orange strips could be seen.

**6. Erdinç Güneş, Turkey: The main purpose of the rapa whelk survey is to collect scientific information for the needs of the rapa whelk commercial fishery management. In Turkey, the use of beam trawl is prohibited in most of the time and areas, in order to protect the other demersal species, especially turbot. The rapa whelk fishing is conducted mostly by diving method. What are the applied measures in the other riparian countries, in particular in Ukraine?**

**Bogdan Hulak, Ukraine:** In the case of Ukraine, the beam trawlers are banned, and allowed only for scientific purposes. The commercial beam trawling is unlegitimate, but there are



poachers. Another gear used in the rapa whelk fishery is the metal dredges (look like boxes). When fishing with these constructions, the turbot bycatches are very low. There are not periods when the rapa whelk fishery with dredges is prohibited in Ukraine. In addition, there are protected areas where any kind of fishing activities are banned.

**7. Ali Gucu, Turkey: Are there false rings on the statoliths, like those we see in the fish otoliths? Do the rings you see on the statoliths correspond to spawning rings?**

**Nuri Basusta, Turkey:** As inner structures, the statoliths are hardly to be affected from the environmental conditions. The rings are usually formed during spring (March), when the spawning period takes place.

**8. Mikhail Piatinskii, Russia: Is any comparison of results this two (Bohdan & Nuri presents) different methods of age reading for individuals and samples are exist? Can mark-based method gave good precision according to direct statoliths method?**

**Bogdan Hulak, Ukraine:** When creating the age reading protocol for rapa whelk (in Elazig), a comparison of different methods was made. For this purpose, a small rapa whelk specimen was used with only one spawning mark. The number of the rings on its statolith was three. Most probably, the rings on the statoliths are formed during the winter season; because the number of the statolith's rings are approximately with two rings more than the spawning marks. The comparison - age reading method vs statolith and spawning marks methods, showed very similar results.

**9. Hüseyin Ozbilgin, Turkey: How long does it take to age a Rapa from its statolith?**

**Nuri Basusta, Turkey:** Around 20 min, to find and extract the statolith and read the age.