

## **SHORT-TERM CONTRACT FOR THE DATA RECOVERY PLAN (ICCAT GBYP 08/2018) OF THE ATLANTIC-WIDE RESEARCH PROGRAMME ON BLUEFIN TUNA (ICCAT GBYP Phase 8)**

### **FINAL REPORT OF THE DATA RECOVERY ACTIVITY**

The data recovery activity was initiated even before receiving the signed contract from ICCAT, because of the arrangements already in place with the family Foderà, in San Vito Lo Capo. Therefore, in the second part of June I moved to San Vito Lo Capo, near Trapani, where it was possible to have a direct access to the old diaries belonging to the family. They keep these diaries like a treasure, even because the condition of the paper was not the best and some pages were fragile.

The history of the tuna trap “**Tonnara del Secco**” is very interesting. Mr. Vito Foderà purchased the trap in 1872, when he was also the owner of the tuna trap of Magazzinazzi and co-owner of the tuna trap of Scopello. When he died, the owner of the trap became his son Giuseppe, who died in 1924, and then by his sons, who were still very young. Therefore, until 1918, the administrator Mr. Nenè Bergamini personally recorded the data on the diaries. From 1919 to 1923, the tenant of the trap (“gabelloto”) was Mr. Giovannino Plaja, cousin of Mr. Foderà godfather of Mr. Nenè Bergamini, who became the owner of the trap in 1929. Mr. Giovannino Plaja was also the administrator of the tuna traps of Magazzinazzi and San Vito. From 1920 to 1962 he was the person who recorded the data on the diaries. He died in 1964. In 1964 and 1965 the tuna trap Tonnara del Secco was managed by the cousins Michelangelo (son of Giovannino the person who recorded the catches on the diaries on these years) and Ettore Plaja, and during these two years the catches were so low that were not sufficient even to cover the costs. In 1969 and 1970, Mr. Michelangelo Plaja, together with other partners, set the trap in front of the beach of San Vito Lo Capo, but they did not fish any tuna; therefore, after 1970, this trap ceased all activities.

As a matter of fact, I had the opportunity to examine one diary at each time, and I was forced to stop for a full week-end because the family moved to another place for a short vacation, while I remained on site for avoiding additional travel and accommodation costs.

Anyway, reading directly the diaries was very interesting, because they had a lot of detailed information, day-by-day, including weather information. The calligraphy was not the best and it varied over the years, because different people wrote the diaries. The “Tonnara del Secco” was not a full “Tonnara”, targeting mostly bluefin tunas, because it operated for many years as a mixed type between a “Tonnara” and a “Tonarella” (small tuna trap), catching a large variety of species. Furthermore, the fishing strategy was very peculiar: when there were other species in the death chamber, then the “rais” was used to take the decision to catch these fish and this operation was called “leva” (possibly the Italian word for “levantada” in Spanish). Sometimes, in these cases, there could be several fishing operations on each day. On the same day, when bluefin tunas were present in the death chamber, they registered this fishing operation as “mattanza” (again, from the Spanish “matanza”). These two types of fishing operations created an initial problem from a statistical point of view, because the catches from the same day were fragmented over the day. Therefore, for avoiding statistical problems, I took the decision to consider each day on which there were catches as one day of “mattanza”, including all species fished on that day.

The list of species by day was very detailed, but sometimes the fish were grouped (always distinguishing them by species), reporting a total weight for a given number of fish, sometimes by size

class, and often using local dialect names. For one of them was not possible to understand the species, because it is not used since more than one century and nobody now knows a species with that name. For the others, here there are the latin names of the species:

Catinaci o catanaci = unknown species.  
Ritunni o rutunni = *Maena smaris*  
Sardella = *Sardina pilchardus* juv  
Occhi grossi = *Scomber japonicus*  
Voipe = *Boops boops*  
Minnole o minole = *Maena maena*  
Ciavoli = *Maena maena* (during the spawning season)  
Varatuli = *Scomber scombrus*  
Aguglie = *Belone belone*  
Cantarigni = bluefin tuna about 100 kg  
Squadro = *Squatina squatina*  
Palombo = *Mustelus mustelus*  
Pesce vacca = *Hexanchus griseus*  
Picara = *Raja* sp.

In the diaries the tuna were often defined in weight categories as **very small**, including tuna below 10kg, **small**, between 10 and 30 kg, **medium**, between 30 and below 100 kg, "**cantarigni**" (dialectal term) between 100 kg and 150 kg, **big**, between 150 and 300 kg, **very big**, more 300 kg.

This was a challenge for preparing the table. In some cases, the diaries were partly incomplete, because the descriptions were not fully inclusive for all the "mattanza" happened in a given month. In these cases, the data are reported by single "mattanza" but then I added also the total catch by month provided by the diaries, which was always higher than the total of the various operations, clearly showing the lack of some data in the daily reporting.

In total, so far, I recovered the data from 564 "mattanza" from Tonnara del Secco, for the years 1912-1965 (including 14 for Magazzinazzi and 12 for Scopello in 1918), while the annual catches are for 88 years, from 1880 to 1979, with few holes.

In some years the diaries included catch data from other traps (due to the common ownership), such as Scopello and Magazzinazzi, but also there are some data from the tuna traps of Punta Raisi, San Cusumano, Bonagia, Favignana and Formica and I added these data on the tables. The tables were re-arranged on the new forms provided by GBYP.

Furthermore I used for the annual catch a form that was sent to me in previous years by GBYP. In some years the total annual catch reported by the diaries are different from the sum of the single operations, possibly meaning that some catches were not included by unknown reasons in the daily catches.

The "field" work in San Vito lo Capo was a little bit longer than scheduled, but it was interesting reading these diaries, because they provide a deep insight view of the way of operating, including all changes in the ownership of the traps.

As concerns the tuna trap of **Baratti** (Tuscany), a trap which is quite often forgotten by the reports, because most of the documents have been lost forever, I went directly to Livorno for having access to the old book notes belonging to Mr. Emilio Canessa (who died in 1990), now belonging to the family of the rais. He copied (in good writing) the notes made by his father and grandfather when the trap was active, but most of the original documents have been lost forever over the years and these are the only available.

Some yearly catches are available, including the by-catch species for few years: from 1901 to 1905. Furthermore, the full list of by-catch species for the period 1980-1922 is also available. The bluefin tuna catches are also available for the years 1879-1883 and for the years 1912-1921 (the availability of these data was not included in the original recovery plan, because it was unknown).

Furthermore, I recovered several years of data from the tuna trap of **Flumentorgiu**, also known under the name of **Port'e Prama** (Sardinia). The catch information goes from 1755 to 1900, but the series is interrupted in several years, particularly at the beginning but not only. The catches are by year, just in total number of tunas, but in several years, it is possible to recover even the number of matanzas. The major problem, in this case, is the difficult calligraphy of the notes, which is also different over the years and sometimes close to unreadable.

Because several catch data for the tuna traps of "Tonnara del Secco" and "Flumentorgiu" were already existing in the ICCAT GBYP BFT data base (recovered mostly from the archives of Prof. Sella) and that these data were kindly provided to me by the GBYP team, I am providing a comparison table, proposing "the best data" shadowing them in green when data from the same year are existing. The proposal is arbitrary, because the data are coming from different sources and, as it is very well known for most of the tuna traps, there are usually different data for the same year. Usually, the most reliable are those of the diaries written by the rais or the administrator for internal purposes, while the reports written by the administrator for the owner for making the official catch declaration to the port authorities (for statistics and tax purposes) were normally lower. This is not always true, because some official declarations were rarely higher for other purposes. Therefore, it is not always clear what the real level of catch was. Of course, the comparison table is provided just to help the GBYP team to take the decision about the best possible estimate to be included in the catch statistics.

Rome, 20 August 2018.