

PRELIMINARY INFORMATION ON THE ATLANTIC BLUEFIN TUNA (*THUNNUS THYNNUS*) FISHERY IN LEBANON

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SUMMARY

The Atlantic bluefin tuna fishery in Lebanon has ancient roots, but knowledge about the current situation is extremely poor. This short paper summarizes available information on the Thunnus thynnus occurrence and landings in Lebanese waters. The Atlantic bluefin tuna is caught mainly by artisanal fishermen and recreational anglers in the spring-summer months and again in the autumn. Juveniles are sporadically captured in September and in November-December. The current ban for fishing offshore in Lebanon is a limiting factor for the expansion of the bluefin tuna fishery. This paper provides also some information about other ICCAT species landed in Lebanon.

RÉSUMÉ

La pêcherie de thon rouge de l'Atlantique au Liban a des racines anciennes, mais les informations sur la situation actuelle sont extrêmement limitées. Ce document succinct résume les informations disponibles sur la présence de Thunnus thynnus et les débarquements de cette espèce dans les eaux libanaises. Le thon rouge de l'Atlantique est principalement capturé par des pêcheurs artisanaux et des pêcheurs à la ligne récréatifs au printemps et en été, puis en automne. Les juvéniles sont capturés sporadiquement en septembre et en novembre-décembre. L'interdiction actuelle de la pêche hauturière au Liban est un facteur limitant l'expansion de la pêcherie de thon rouge. Ce document fournit également des informations sur d'autres espèces de l'ICCAT débarquées au Liban.

RESUMEN

La pesquería de atún rojo del Atlántico en Líbano tiene raíces antiguas, pero los conocimientos acerca de la situación actual son muy escasos. Este breve documento resume la información disponible sobre la presencia y los desembarques de Thunnus thynnus en aguas libanesas. El atún rojo del Atlántico lo capturan principalmente pescadores artesanales y pescadores de pesca de recreo en los meses de primavera y verano y de nuevo en otoño. Los juveniles se capturan esporádicamente en septiembre y en noviembre-diciembre. La prohibición actual de pescar en aguas de Líbano es un factor limitante para la expansión de la pesquería de atún rojo. Este documento facilita también alguna información acerca de otras especies de ICCAT desembarcadas en Líbano.

KEYWORDS

*Atlantic bluefin tuna, Mediterranean Sea,
Levantine Sea, Lebanon, By-catch, Sport fishery*

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1. Foreword

The presence of the Atlantic bluefin tuna (*Thunnus thynnus*) in the easternmost Mediterranean and in Lebanese waters is known since ancient times. This has been documented by the presence of tuna salting plants in several areas, including Lebanon (Di Natale, 2015). Unfortunately, information on the catches of this species in Lebanon lacks over the centuries and scientific records are scarce and without clear evidence (Gruvel, 1931; George *et al.*, 1964; Sami *et al.*, 1996).

During their migration course, Atlantic bluefin tunas are known to move towards the Levantine Sea and Turkey. They pass off the coast of Lebanon, right after crossing Egyptian waters (Sarà, 1964, 1983, 1998). Di Natale *et al.* (2006) considered the Lebanese area among the juvenile bluefin tuna sensitivity zones, confirming with new information older knowledge. Juveniles were also considered present in that same area by Sarà (1964).

Lebanon is not an ICCAT CPC and no official catch statistics are provided to ICCAT. Furthermore, the local fishery is not particularly focused on targeting ICCAT species and, therefore, the landings are not duly recorded and statistics unavailable. There is also some confusion in species identification, because some of the catch is marketed under the same common name.

2. The bluefin tuna fishery in Lebanon

According to the information collected so far, there are two main fishing seasons for the Atlantic bluefin tuna in Lebanon. The first one shows the presence of the species between April and July, extending sometimes to August. Some sport fishermen reported that their behavior is similar to the one known during the spawning activity and also highlighted mature gonads in an advanced stage during that period. The Lebanese waters are not known to be a spawning area for the bluefin tuna, but no data is available to confirm or deny this. The catches are mostly constituted of medium-size fish, because the fishermen are not equipped to catch giant tunas. The minimum legal size for this species in Lebanon is 95 cm.

The second season ranges between October and mid-December. Here medium-size bluefin tunas are captured, assuming that they are part of those “resident” fish that are staying for more than one year in the Mediterranean, instead of migrating to the Atlantic (Di Natale *et al.*, 2005). Juveniles (apparently age 1) are sporadically captured in September and then in December, marking the end of the season for this species. It is extremely difficult to have a reliable idea of the catches, because juvenile tunas are marketed using the common name of other tuna-like species.

Sport fishermen use rods and reels and catch fish mainly by trolling and surface casting, while artisanal fishermen target them with longlines. Additional individuals may also be caught with set nets, small purse-seines and longlines.

3. Preliminary information about other ICCAT species in the Lebanese waters

The information about the presence of other tunas and tuna-like species under the management of ICCAT in the Lebanese waters is very limited. For most of the species, this information is reported by Di Natale *et al.* (2009). Carpenteri *et al.* (2006) reported also some data on the artisanal fishery in Tyre. Information on the minimum landing size in Lebanon is on <http://extwprlegs1.fao.org/docs/pdf/leb46714.pdf>.

The ICCAT species present in the Lebanese waters are the following:

- *Xiphias gladius* (Swordfish): the only available information reports 3 tons/year in 2015³, but the reliability of this data is unknown.
- *Tetrapturus belone* (Mediterranean spearfish): no information about the quantities landed, but the species is occasionally caught by sport fishermen.
- *Thunnus alalunga* (Albacore): this is a common species in Lebanon, but no information exists about the quantities landed.
- *Scomberomorus commerson* (Narrow-barred spanish mackerel): this invasive species is quite common in the area and the latest available information reports 30 tons in 2006. It seems that recent years' catches were significantly higher.

³ <https://www.tridge.com/intelligences/swordfish/LB/season>

- *Sarda sarda* (Atlantic bonito): Minimum size 40 cm; available information reports 233 tons in 2006 showing that it is a common species with a high market value (2.5 M US\$/year together with Atlantic little tunny) while more recent information reports only 1 ton in 2015⁴. The reliability of this information is unknown.
- *Euthynnus alletteratus* (Atlantic little tunny): Minimum size 45 cm; the latest available information (2006) reports 137 tons and a high market value (2.5 M US\$/year together with Atlantic bonito).
- *Auxis rochei* (Bullet tuna): Minimum size is 35 cm; no quantitative data exists because the catch is not properly reported but it is a common species in Lebanon.
- *Katsuwonus pelamis* (Skipjack tuna): Minimum size is 40 cm; no quantitative data exists but the species seems to be common.
- *Orcynopsis unicolor* (Plain bonito): Minimum size is 75 cm; no quantitative data exists but the species seems to be uncommon or even absent.
- *Acanthocybium solandri* (Wahoo): No quantitative data exists and only anecdotic information is available.

Besides the Atlantic little tunny and the bullet tuna, most of the tuna-like species do not have a target fishery and are captured together with other species by the artisanal fishery. The major problem is the confusion in identification, because several species are marketed under the same name.

4. Discussion

The current knowledge regarding the presence and distribution of the Atlantic bluefin tuna in the Lebanese waters is poorly documented and data is desperately lacking. This is despite the fact that the species is regularly present during (or close to) the spawning season and then again in the autumn, when “resident” tunas are in superficial waters for feeding purposes. Altogether, the species can be found off Lebanon for over nine months each year.

Despite that, it remains a hard task to collect scientific information in the country since commercial fishery does not directly target the species and no industry exists whatsoever. Most of the catch is captured by a group of recreational anglers and most catches are occasional and not duly reported, knowing that sport fishermen often sell their fish. This applies to several other tunas and tuna-like species occurring in the same area as well.

According to the existing rules in Lebanon, fishing activity is allowed only within 6 nm from the coast and naval activities between 6 and 12 nm are subject to special permits issued by the Lebanese army. This creates a problem for the development of the bluefin tuna fishery in Lebanon, since this species does not usually occur in coastal waters. Only those recreational anglers that get the special permit can fish in this zone but not professional fishermen. Furthermore, the activity of foreign fishing vessels in Lebanese waters is strictly forbidden.

The geographical location of Lebanon in the easternmost part of the Mediterranean Sea and the vicinity to known spawning grounds make the offshore waters of this country a crucial area for scientific work to take place. This will definitely improve the knowledge on the occurrence and biology of the Atlantic bluefin tuna in the Levant area and will certainly unveil hidden aspects that may help in better understanding the migration, spawning and movement patterns of both juveniles and adults in the Levantine Sea. Furthermore, the presence of many other tunas and tuna-like species in the same time and space may provide additional and unique opportunities for filling several gaps regarding these species, as they can be easily included in any study taking place since captured by the same people. This will certainly result in providing additional reliable data, better understanding of the biology and definitely more accurate assessments of all the tunas and tuna-like species, including the Atlantic bluefin tuna.

⁴ <https://www.tridge.com/intelligences/atlantic-bonito/LB/product>

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