

short scientific article  
received: 2016-09-01

DOI 10.19233/ASHN.2016.20

FIRST RECORD OF THE TRIPLETAIL *LOBOTES SURINAMENSIS*  
(PISCES: LOBOTIDAE) IN THE LAGOON OF MARANO AND GRADO  
(GULF OF TRIESTE, NORTHERN ADRIATIC SEA)

*Nicola BETTOSO*

ARPA FVG, via A. La Marmora 13, 34139 Trieste, Italy  
e-mail: nicola.bettoso@arpa.fvg.it

*Giovanni COMISSO*

Riserva Naturale Regionale "Valle Canal Novo", via delle Valli 2, 33050 Marano Lagunare (UD), Italy

*Petar KRUŽIĆ*

Laboratory for Marine Biology – Department of Biology, Rooseveltov trg 6, 10000 Zagreb, Croatia

ABSTRACT

*On 18<sup>th</sup> July 2016 one specimen of tripletail Lobotes surinamensis (Bloch, 1790) (Lobotidae) was caught by fishermen in the Lagoon of Marano and Grado (Gulf of Trieste). This is the first record in the northernmost area of the Adriatic Sea and Mediterranean, too.*

**Key words:** tripletail, *Lobotes surinamensis*, Lagoon of Marano and Grado, Gulf of Trieste, northern Adriatic Sea.

PRIMA SEGNALAZIONE DEL PESCE FOGLIA *LOBOTES SURINAMENSIS* (PISCES:  
LOBOTIDAE) NELLA LAGUNA DI MARANO E GRADO  
(GOLFO DI TRIESTE, ALTO ADRIATICO)

SINTESI

*Il 18 luglio 2016 un esemplare di pesce foglia Lobotes surinamensis (Bloch, 1790) (Lobotidae) è stato catturato dai pescatori nella Laguna di Marano e Grado (Golfo di Trieste). Questa cattura rappresenta la prima segnalazione nell'area più settentrionale del Mare Adriatico, Mediterraneo compreso.*

**Parole chiave:** pesce foglia, *Lobotes surinamensis*, Laguna di Marano e Grado, Golfo di Trieste, Alto Adriatico

## INTRODUCTION

The tripletail *Lobotes surinamensis* (Bloch, 1790) has a worldwide distribution in marine and brackish tropical and subtropical waters (Sazima *et al.*, 2009 and reference therein), whereas in the Mediterranean Sea is considered a rare species (Akyol & Kara, 2012).

The first written record of this fish in the Mediterranean basin comes from Sicilian waters (Doderlein, 1875), since then its presence was mainly recorded in the southern area: Ben-Tuvia (1953) and Golani (1996, 1997) in Israeli waters; Bini (1968) off Calabria (Italy); Tortonese (1975) off Rhodes (Greece), Turkey and Lebanon; Palom (1991) in Barcelona waters (first record for the Iberic ichthyofauna); Bradaï (2000) in Tunisian waters and Hemida *et al.* (2003) off Algeria. The first record in the Adriatic Sea arose to June 2010, when a specimen was caught off Island Biševo (Central Adriatic) (Dulčić & Dragičević, 2011), whereas in December 2011 a male was captured in Mali Ston Bay, southern Adriatic (Dulčić *et al.*, 2014a); on May 2013 it was recorded in the northern Adriatic Sea (Raša Bay, southern coast of Istrian Peninsula) (Dulčić *et al.*, 2014b).



**Fig. 1:** *Lobotes surinamensis* caught in the Lagoon of Marano and Grado (Photo: P. Dal Forno).

**Sl. 1:** Primerek vrste *Lobotes surinamensis*, ujet v maranski in gradeški laguni (Foto: P. Dal Forno).

The present paper represents the first record in the Lagoon of Marano and Grado and for the Gulf of Trieste, which is the northernmost area of the Adriatic Sea and Mediterranean too.

## MATERIAL AND METHODS

One specimen of *L. surinamensis* was caught on 18<sup>th</sup> July 2016, using the fyke nets. As the fishermen sold it immediately, we were able to obtain only the total weight from the fish market of Marano Lagunare, whereas the total length can be approximately estimated by the expanded polystyrene box used for fish packaging (50 x 32 cm) (Fig. 1). The species identification was based on the photograph, according to Rounds & Feeney (1993): the distinctive shape of the dorsal and anal fins along with the caudal fin gives the tail a 'trilobed' appearance.

## RESULTS AND DISCUSSION

The capture of *Lobotes surinamensis* was located 1 km off Stella River mouth in the Lagoon of Marano and Grado (Fig. 2), at a depth of approximately 1 m, on muddy sediment. The total weight was 2.9 kg and the total length about 500 mm. The one who bought this specimen has observed the presence of eggs mass inside, therefore we could speculate it was a female. Strelcheck *et al.* (2004) noted that fifty percent of female analyzed in the Gulf of Mexico reached sexual maturity by 494 to 594 mm of total length and approximately 1 to 2 years of age. In this way the specimen caught in the lagoon can represent the first adult female caught in the Adriatic Sea, compared to previous records of Dulčić & Dragičević (2011), Dulčić *et al.* (2014b) and Dulčić *et al.* (2014a), who found two relatively juvenile individuals and a male specimen respectively. In October 2015 a



**Fig. 2:** Map of the Gulf of Trieste with the location of the record in the Lagoon of Marano and Grado.

**Sl. 2:** Zemljevid Tržaškega zaliva z označeno lokaliteto ulova v maranski in gradeški laguni.

specimen was officially recorded for the first time in the Italian Adriatic coast (Manfredonia, southern Adriatic), but size data are not available (Dailianis *et al.*, 2016).

Tripletails usually occur in bays (Myers, 1999) and brackish estuaries (Brown-Peterson & Franks, 2001; Strelcheck *et al.*, 2004) or sometimes in the open sea where they can be associated with floating objects (Massuti & Renones, 1994). Juvenile specimens may occur in floating Sargassum and mimic a floating leaf to camouflage against predators (Myers, 1999). Similar behavior is also known for adults, which are often observed floating on their sides at the surface probably to avoid predators and to ambush their prey (Massuti & Renones, 1994). The maximum total length reported for this species is 1 m, adults are benthic-pelagic and feed on small fishes and benthic crustaceans (Dailianis *et al.*, 2016), which are very abundant in the Lagoon of Marano and Grado (Bettoso *et al.*, 2013). Ounifi-Ben Amor *et al.* (2016) found large quantities of spheromatid isopods and amphipods in the stomach content of two females caught in the Tunis southern lagoon. In addition Merriner & Foster (1974) state that *L. surinamensis* feeds mainly on clupeids, whereas Franks *et al.* (2003) reported a diet

composition constituted by 49.4% of crustaceans and 50.6% of bony fishes. Finally Zava *et al.* (2007) found two specimens of *Naucrates ductor* in the stomach of a tripletail caught in the southern Tyrrhenian Sea.

Findings of *L. surinamensis* in the Adriatic Sea are probably a consequence of increased abundance of this species in the southern Mediterranean waters amplified by the changes in hydrological conditions in the area (Dulčić *et al.*, 2014a). It seems that this species recently established its population in the area of Maltese islands which is indicated by the presence of juveniles (Deidun *et al.*, 2010). This record reveals its appearance in the northernmost area of the Mediterranean Sea. Further observations will be necessary to learn more about the ecology of the tripletail in this basin.

#### ACKNOWLEDGEMENTS

We wish to thank fishermen Pietro Dal Forno and Tiziano Ghenda from Marano Lagunare, Dr. Alessandro D'Aiotti for technical assistance, Dr. Diego Borme e Dr. Luca Castriota for the confirming of identification.

## PRVI ZAPIS O POJAVLJANJU VRSTE *LOBOTES SURINAMENSIS* (PISCES: LOBOTIDAE) V MARANSKI IN GRADEŠKI LAGUNI (TRŽAŠKI ZALIV, SEVERNI JADRAN)

Nicola BETTOSO

ARPA FVG, via A. La Marmora 13, 34139 Trieste, Italy  
e-mail: nicola.bettoso@arpa.fvg.it

Giovanni COMISSO

Riserva Naturale Regionale "Valle Canal Novo", via delle Valli 2, 33050 Marano Lagunare (UD), Italy

Petar KRUŽIĆ

Laboratory for Marine Biology – Department of Biology, Rooseveltov trg 6, 10000 Zagreb, Croatia

#### POVZETEK

Osemnajstega julija 2016 so ribiči ujeli primerek ribje vrste *Lobotes surinamensis* (Bloch, 1790) (Lobotidae) v maranski in gradeški laguni (Tržaški zaliv). To je prvi zapis o pojavljanju te vrste v najsevernejšem predelu Jadranskega in obnem Sredozemskega morja.

**Ključne besede:** trirepka, *Lobotes surinamensis*, maranska in gradeška laguna, Tržaški zaliv, severni Jadran.

## REFERENCES

- Akyol, O. & A. Kara (2012):** Record of the Atlantic tripletail, *Lobotes surinamensis* (Bloch, 1790) in the Bay of Izmir, northern Aegean Sea. *J. Appl. Ichthyol.*, 28 (4), 645-646.
- Ben-Tuvia, A. (1953):** Mediterranean fishes of Israel. *Bull. Fish. Stat.*, 8, 1-40.
- Bettoso, N., A. Acquavita, A. D'Aiotti & G. Mattassi (2013):** The Marano and Grado Lagoon: a brief synopsis on the aquatic fauna and fisheries resources. *Annales, ser. Hist. Nat.*, 23 (2), 135-142.
- Bini, G. (1968):** Un pesce perciforme raro per i mari italiani (*Lobotes surinamensis* Bloch, 1790). *Atti Soc. Pelorit. Sci. Fis. Mat. Nat.*, 14 (1-2), 49-53.
- Bradaï, M. N. (2000):** Diversité du peuplement ichtyque et contribution à la connaissance des sparidés du golfe de Gabès. PhD Thesis, University of Sfax, Tunisia, 600 pp.
- Brown-Peterson, N. J. & J. S. Franks (2001):** Aspects of the reproductive biology of tripletail, *Lobotes surinamensis*, in the northern Gulf of Mexico. *Proc. of 52nd Gulf and Caribbean Institute*, 586-597.
- Dailianis, T., O. Akyol, N. Babali, M. Bariche, F. Crocetta et al. (2016):** New Mediterranean biodiversity records (July 2016). *Medit. Mar. Sci.*, 17 (2), 608-626.
- Deidun, A., P. Vella, A. Sciberras & R. Sammut (2010):** New records of *Lobotes surinamensis* (Bloch, 1790) in Maltese coastal waters. *Aquatic Invasions*, 5 (1), S113-S116.
- Doderlein, P. (1875):** Descrizione di una specie del genere esotico *Lobotes* preso nelle acque dei contorni di Palermo. *Atti Accad. Sci. Palermo*, 5 (3), 1-12.
- Dulčić, J. & B. Dragičević (2011):** First record of the Atlantic tripletail, *Lobotes surinamensis* (Bloch, 1790), in the Adriatic Sea. *J. Appl. Ichthyol.*, 27, 1385-1386.
- Dulčić, J., B. Dragičević, N. Antolović, J. Sulić-Šprem, V. Kožul & R. Grgičević (2014a):** Additional records of *Lobotes surinamensis*, *Caranx crysos*, *Enchelycore anatina*, and *Lagocephalus sceleratus* (Actinopterygii) in the Adriatic Sea. *Acta Ichthyol. Piscat.*, 44 (1), 71-74.
- Dulčić, J., B. Dragičević, L. Lipej & M. Štifanić (2014b):** Range extension of tripletail *Lobotes surinamensis* (Lobotidae) in the Adriatic Sea. A northernmost record in the Mediterranean. *Cybium*, 38 (2), 153-154.
- Franks, J. S., K. E. Vander Kooy & N. M. Garber (2003):** Diet of tripletail, *Lobotes surinamensis*, from Mississippi coastal waters. *Gulf Caribb. Res.*, 15, 27-32.
- Golani, D. (1996):** The marine ichthyofauna of the eastern Levant. History, inventory and characterization. *Isr. J. Zool.*, 42, 15-55.
- Golani, D. (1997):** Handbook of the fishes of Israel. Keter Publishing House, Jerusalem, 269 pp. (in Hebrew)
- Hemida, F., D. Golani, Y. Diatta & C. Capapé (2003):** On the occurrence of the tripletail, *Lobotes surinamensis* (Bloch, 1790), off the coast of Algeria (southern Mediterranean). *Annales, ser. Hist. Nat.*, 13 (2), 145-148.
- Massuti, E. & O. Renones (1994):** Observations on the pelagic fish community around floating objects in the open sea off Mallorca. *Bol. Inst. Esp. Oceanogr.*, 10, 81-93.
- Merriner, J. V. & W. A. Foster (1974):** Life history aspects of the tripletail, *Lobotes surinamensis* (Chordata-Pisces-Lobotidae), in North Carolina waters. *J. Elisha Mitchell Sci. Soc.*, 90 (4), 121-124.
- Myers, R. F. (1999):** Micronesian reef fishes: a comprehensive guide to the coral reef fishes of Micronesia, 3rd revised and expanded edition. Coral Graphics, Barrigada, Guam, 330 p.
- Ounifi-Ben Amor, K., M. M. Ben Amor, J. Ben Souissi & C. Capapé (2016):** Unusual records of tripletail *Lobotes surinamensis* (Osteichthyes: Lobotidae) from the Tunis southern Lagoon (North-eastern Tunisia, Central Mediterranean Sea). *Annales, ser. Hist. Nat.*, 26 (1), 13-18.
- Palom, O. (1991):** Primera cita de *Lobotes surinamensis* (Pisces, Lobotidae) para la ictiofauna Ibérica. *Misc. Zool.*, 15, 240-242.
- Rounds, J. M. & R. F. Feeney (1993):** First record of the tripletail (*Lobotes surinamensis*, family Lobotidae) in California waters. *Calif. Fish and Game*, 79 (4), 167-168.
- Sazima, I., A. Grossman, A. Carvalho-Filho & C. Sazima (2009):** First record of the tripletail or blackfish (*Lobotes surinamensis*) from an oceanic island in the South Atlantic. *Mar. Biodivers., Rec.* 2, e97 doi:10.1017/S1755267209001195.
- Strelcheck, A. J., J. B. Jackson, J. H. Cowan Jr & R. L. Shipp (2004):** Age, growth, diet, and reproductive biology of the tripletail, *Lobotes surinamensis*, from the north-central Gulf of Mexico. *Gulf Mex. Sci.*, 22, 45-53.
- Tortonese, E. (1975):** Osteichthyes, pesci ossei, parte 2. In: *Fauna d'Italia*, 12, 1-686.
- Zava, B., P. Gianguzza & S. Riggio (2007):** Nuova cattura di *Lobotes surinamensis* (Bloch, 1790) in Tirreno Meridionale (Osteichthyes: Lobotidae). *Biol. Mar. Medit.*, 14 (2), 370-371.