

## NOTA CIENTÍFICA

### ***THIRD APPEARANCE OF THE BLUESPINE UNICORNFISH, *Naso unicornis* (FORSSKÅL, 1775) (ACTINOPTERYGII: ACANTHURIDAE) IN THE ARABIAN SEA COASTS OF OMAN***

Terceiro registro de *Naso unicornis* (Forsskål, 1775) (Actinopterygii: Acanthuridae) na costa de Oman, Mar da Arábia

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#### **ABSTRACT**

*The bluespine unicornfish, *Naso unicornis*, is recorded from off the south coast of Oman for the third time. It is described on the basis of one adult specimen 563 mm total length. The specimen obtained from waters around City of Shalala at the Arabian Sea coast of Oman. This account represents the third appearance of this species in about 20 years. Accordingly, the species is considered rare in the Omani waters. The total and standard lengths are compared with specimens caught from Gulf of Aqaba, Red Sea, Great Barrier Reef, Australia and specimen mentioned in Fishbase.*

**Keywords:** *Naso unicornis, occurrence report, coast of Oman, Arabian Sea.*

#### **RESUMO**

*Neste artigo, a espécie de peixe *Naso unicornis* é registrada para a costa sul de Oman, pela terceira vez.. Sua descrição é feita com base em um espécime adulto medindo 563 mm de comprimento total, capturado nas águas em frente à cidade de Shalala, na costa de Oman, Mar da Arábia. Este registro representa a terceira ocorrência desta espécie em cerca de 20 anos, portanto, sendo considerada rara nessas águas. Valores dos comprimentos total e padrão são comparados com espécimes capturados no Golfo de Aqaba, Mar Vermelho, Grande Barreira de Coral da Austrália e um espécime mencionado no site Fishbase.*

**Palavras-chaves:** *Naso unicornis, registro de ocorrência, costa de Oman, Mar da Arábia.*

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## INTRODUCTION

There are six families in the suborder Acanthuroidei, they contain tropical fishes with a high level of structural and morphological diversity (Randall, 2002; Tyler et al., 1989; Winterbottom and McLennan, 1993). Most species are deep-bodied laterally compressed fishes with a benthic foraging mode that feed on a variety of sessile and motile invertebrates and marine plants and are strongly associated with reef environments (Tyler et al., 1989). The family Acanthuridae comprises 6 extant genera containing 80 species with *Naso*, the second largest genus in the family, having 19 recognized species (Randall, 2002). They were found from the Red Sea and East Africa to the Hawaiian, Marquesas and Tuamoto islands, north to southern Japan, south to Lord Howe and Rapa islands (Froese and Pauly, 2014).

In the Omani waters, family Acanthuridae is comprised of 4 genera and 11 species with genus *Naso* containing 3 species.

The bluespine unicornfish, *N. unicornis* (Figure 1) was first described by Forsskål in 1775 as *Chaetodon unicornis* from Jeddah, Saudi Arabian coasts of the Red Sea. Since then it has been reported from different localities world-wide (Eschmyer, 2014). This species is not recorded from Omani waters until 1995 when Randall reported it from the Arabian Sea coasts of Oman. No specimen of this species is caught from Omani waters since then until 2003 when Manilo and Bogorodsky reported the second appearance of this species from the northern Arabian Sea. During

the last 11 years, no catch of bluespine unicornfish has been turned up. Such scattered appearance in the Omani waters makes this species a rare species in the Omani waters.

In the present study a record of *N. unicornis* is reported from the Arabian Sea coasts of Oman. This is an important record as it represents the third appearance of this species in the Omani waters since its original description (in Forsskål, 1775).

## MATERIAL AND METHODS

On June 27, 2012, the bluespine unicornfish, *N. unicornis*, was collected from the coasts of Shalala City on the Arabian Sea coasts of Oman. The specimen was caught by fishermen using 30 x 10 m drifting gill nets of 25 mm mesh size, and measured with dial callipers to the nearest 0.1 mm. The fishermen usually make two to three hauls per hour. The morphometric and meristic details of the two species were recorded according to Randall (2002). The specimen was then fixed in 10% formaldehyde solution and preserved in 70% ethanol and deposited in the fish collection of the Marine Science and Fisheries Centre, Muscat, Oman, Catalogue no. OMMSFC 1196.

## RESULTS

The specimen of *N. unicornis* is identical to the general description of this species with standard length of 363 mm. It can attain standard length of 700 mm and in shore associated with coral reefs or rocky substrata (Randall, 1995).



Figure 1 - *Naso unicornis*, 563 mm total length, 363 mm standard length.

*Naso unicornis* characterised by the following set of characters: D. VI, 31; anal fin II, 26-30; pectoral fin 17; pelvic fin I, 2. The following body measurements were taken in mm: total length 563; standard length 363; head length 117; preorbital length 95; postorbital length 112; eye diameter 18; Predorsal fin length 103; postdorsal fin length 354; prepectoral fin length 99; pectoral fin length 77; preanal fin length 132; 356; maximum body depth 180; caudal peduncle depth 22.

Body is oval, deep and compressed. A horn-like rostral projection directly anterior to eye, but not reaching anterior to mouth, snout is pointed, mouth terminal with powerful compressed teeth. Dorsal profile of snout to horn straight forming an angle to horizontal axis of body. Large caudal spines forwardly curved. Slightly emarginated caudal fin with long filaments originated from each lobe. Light olive-coloured body with blue pedunculate plates and keels. Lips are bluish and dorsal and anal fins with blue margin.

## DISCUSSION

The standard lengths of the present study (363 mm) are larger than the specimen mentioned in the Fishbase (Froese & Pauly, 2014) (287 mm SL) and larger than the specimens obtained by Khalaf & Disi (1997) from the Gulf of Aqaba, Red Sea (56-165 mm SL) and that obtained by Choat *et al.* (2002) from the Great Barrier reef, Australia (457 mm TL). Also, the dorsal, anal, and pelvic fins have lower fin rays count than the specimens of this species reported by the previous studies from different parts of the world (Randall, 1995; Khalaf & Disi, 1997; Allen *et al.*, 2012).

*Naso unicornis* has two synonyms and it has never been recorded previously under any of its synonyms from the Omani waters since its first description occurred in 1775 (White & Barwani, 1971; Randall, 1995; Al-Abdessalaam, 1995; Al-Jufaili *et al.*, 2010).

This species differs from *N. fageni* and *N. lituratus* present in the area in having 27-30 dorsal and anal fins ray count; high pectoral fin ray count; Bony horn above the eye; and blue caudal spine (creamy white in *N. lituratus* and olive grey in *N. fageni*).

During the last 20 years since the first report of this species from the Omani waters by Randall (1995), it has been recorded only once from the Arabian Sea coasts of Oman in 2003 by Manilo & Bogorodsky. Since then, this species has not been seen in the Omani waters. This is the third

documentation of its occurrence in the study area, indicating a significant range extension of its previously known distribution, proving its rarity in the Omani waters. The importance of the present record of *N. unicornis* comes as a result of extensive ichthyological collections in the area and the limited number of the members of the genus *Naso* in Omani waters.

It is premature to assess whether the present population is represented by only one visitor exploring the new area or whether it is a well-established population hitherto undetected, probably due to the lack of ichthyological expeditions and fishery surveys. Thus, there is a need to investigate further the frequency of occurrence and to study the biological characteristics of this species in order to determine whether it has established a sustainable population in its new surroundings.

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