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On the Presence of the Non-Indigenous Three Soft Coral Dendronephthya sp. in the Lebanese Waters, Eastern Mediterranean Sea

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Short Communication

Dendronephthya is a genus of soft corals found in the tropical waters of the Indo-Pacific Ocean. It is also common in the northern Red Sea [1,2].

In the Mediterranean Sea, *Dendronephthya* sp. was reported from its southern Levantine Sea for the first time in May 2023 [3]. In this context, this note will discuss the first presence of the new Non-Indigenous Species (NIS) soft coral of the genus Dendronephthya in the Lebanese waters of the eastern Mediterranean Sea.

On 03rd March 2023, first specimens of a new soft coral species were observed and photographed by Lebanese professional divers (LK, and SL) during a marine biodiversity survey at a depth ranging between 34 and 40 m off a rocky bottom at 2.5 km offshore Byblos coast, north Lebanon (Figure 1). After the divers shared the photos and videos with the authors (AB and RA), it became clear that it is the new NIS three soft coral of the genus *Dendronephthya* (Figure 2A). Accordingly, the diving team monitored the species at the same spot, and some samples were collected and preserved in the Institute of the Marine Protected Area of Tyre Coast Nature Reserve (TCNR), with code LEBSPI19.

Based on the monitoring, the species fast propagation was significant: on 16th April 2023, a colony of the soft coral started to be observed at a depth of 42 m of Byblos rocky bottom (Figure 2B), and on 16th May 2023 dense colonies of Dendronephthya sp. (Figure 2C) were observed and photographed. It is well noted that the species' colonies can still be observed at the exact location. From a morphological point of view, Dendronephthya sp. photographed and collected from the Lebanese waters is similar to those described from other Levantine Sea countries [3]. It is characterized by its delicate, vibrant colors and intricate branching structure with polyps that extend from the branches [3].

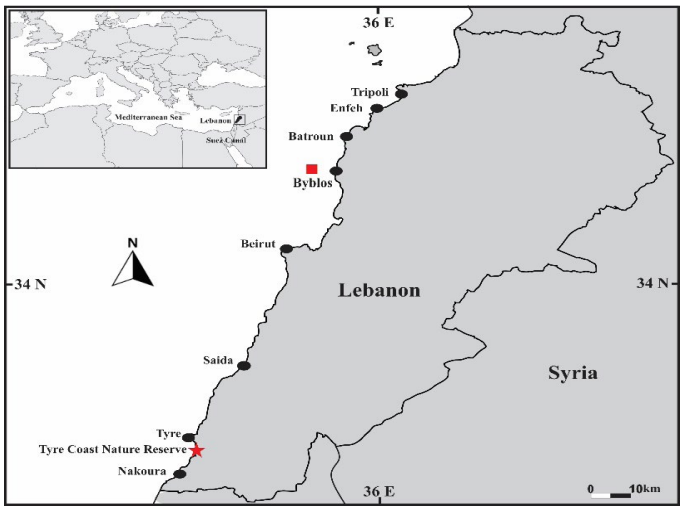

Figure 1: Map showing the location where Dendronephthya sp. where observed and photographed in the Lebanese waters of Byblos (red square). And the Location of Tyre Coast Nature Reserve (red star) where the sample of Dendronephthya sp. where preserved.

Based on [3], the species of Dendronephthya newly introduced in the Mediterranean Sea could be D. hemprichi. However, more investigation and genetic analysis of specimens are still needed to confirm it. The introduction of Dendronephthya sp. in the Mediterranean Sea still needs to be clarified. However, whatever the introduction vector (e.g., aquarium release/ or Suez Canal), Dendronephthya sp. should be followed up, knowing its rapid expansion (Nativ et al., 2023, and proved in this current note), and its fast propagation mode by asexual

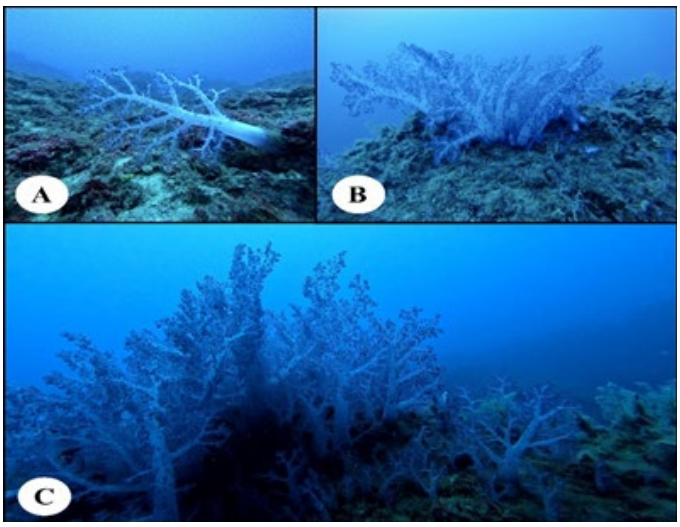

Figure 2: Specimens and colonies of Dendronephthya sp. observed and photographed in the Lebanese waters of Byblos rocky bottom. 2A. First specimen of Dendronephthya sp. observed and photographed on 03th March 2023 at 34 m depth. 2B. Colony of Dendronephthya sp. observed and photographed on 16th April 2023 at 42 m depth. 2C. Colonies of Dendronephthya sp. observed and photographed on 16th May 2023 at 45 m depth.

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propagation [4]. This note provides the first documented evidence of Dendronephthya sp. in the Lebanese waters, expanding this genus's known distribution in the southern Levantine sea of the eastern Mediterranean Sea. The ecological role of soft corals in this region remains to be elucidated. However, it is worth noting that soft corals are vulnerable to environmental stressors, including climate change and pollution [1]. In this context, further research and investigations into the taxonomy, ecology of Dendronephthya sp. are warranted for effective monitoring, allowing the assessment of their distribution status and anticipating the potential impacts on the local marine habitats.

References

1. Fabricius K, Alderslade P (2001). Soft Corals and Sea Fans: A Comprehensive Guide to the Tropical Shallow Water Genera of the Central-West Pacific, the Indian Ocean and the Red Sea. Australian Institute of Marine Science, Townsville, Australia, 2001. 265pp.
2. Grossowicz M, Yehuda B (2012). Differential morphological features of two *Dendronephthya* soft coral species suggest differences in feeding niches. Marine Biodiversity 42: 65-72.
3. Nativ H, Galili O, Almul R, Einbinder S, Tchernov, D, Mass T et al. (2023). New Record of *Dendronephthya* sp. (Family: Nephtheidae) from Mediterranean Israel: Evidence for Tropicalization?. Biology 12, 1220.
4. Dahan M, Benayahu Y (1997). Clonal Propagation by the Azooxanthellate Octocoral *Dendronephthya hemprichi*. Coral Reefs, 16: 5-12.