

Scientific note

First record for the Gulf of Venice: the doridid sea slug *Goniodoridella picoensis* (Paz-Sedano, Ortigosa & Pola, 2017), spotted in the Lim Channel Marine Reserve, Croatia

(Mollusca: Heterobranchia: Doridida)

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Goniodoridella picoensis is a small white dorid nudibranch with yellow-tipped cerata feeding, e.g., on bryozoans. The species was discovered 2013 and first described as *Okenia picoensis* almost one decade ago from off the Azores Island of Pico (Paz-Sedano et al. 2017). Not included in reviews of that genus in the Mediterranean (García-Gómez et al. 2011, Pola et al. 2019), a clade with similar species was later placed as sister to *Okenia* sensu lato (Paz-Sedano et al. 2024). Since then, unaware of its original distribution pattern, the species was observed in many parts of the Mediterranean including the Kvarner Gulf (Fantin et al. 2023) except the Gulf of Venice (see also <https://opisthobranquis.info/en/guia/doridida/doridoidei/onchidoridoidea/goniodoridella-picoensis/>), starting 2020 off Malta (Pontes & Madrenas 2021). The distribution history reviewed by Trainito et al. 2022 and Pontes et al. 2025 either documents a rapid invasion of this species into the Mediterranean, or simply reflects the current history of discovery of a species that has long been established there. During our expedition to Limski zaljev Marine Reserve (northern Adriatic Sea, Croatia) in 2025, one individual of *G. picoensis* was spotted on September 29th during a SCUBA dive far back in the channel (45°08'0.16" N, 13°41'53.22" E), at the south slope (depth 18 m) on red algae with bryozoans (Fig. 1). This allows us to record this species for the first time in the northernmost Adriatic Sea (here: Marine Sector 9 sensu Bianchi 2004). The discovery presented here happened in the course of a systematically broad-based long-term inventory of the biodiversity of the Brijuni Marine Protected Area and the adjacent marine waters. In this context, we have already demonstrated the first occurrence of other species in the northern Adriatic



Fig. 1. Photographic record of *G. picoensis*. Lim Channel Marine Reserve, on red algae overgrown with bryozoans, head is to the left (photo: M. Heß, Sept. 29th, 2025).

(e.g. *Automate branchialis* (Crustacea): Ceseña et al. 2017, *Stenopus spinosus* (Crustacea): Melzer et al. 2023, *Apogon imberbis* (Teleostei): Mavrič et al. 2025). Such studies are important for a realistic picture of marine species composition and its temporal dynamics, particularly as a basis for conservation-related decisions in an era of global warming and the invasion of non-native species.

References

- Bianchi, C. N. 2004. Proposta di suddivisione dei mari italiani in settori biogeografici. *Notiziario SIBM* 46: 57–59.
- Ceseña, F., Geiselbrecht, H., Heß, M., Landmann, S., Lehmann, T., Mavrič, B., Melzer, R. R., Meyer, R., Pfannkuchen, M. & Buršić, M. 2017. First record of

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- the snapping shrimp, *Automate branchialis* Holthuis & Gottlieb, 1958 for Croatian waters (Decapoda, Alpheidae). *Spixiana* 40: 36.
- Fantin, M., Ciriaco, S., Faresi, L., Scrigner, C., Vecchi, J., Trkov, D. & Lipej, L. 2023. First evidence of the presence of *Okenia picoensis* Paz-Sedano, Ortigosa & Pola, 2017 (Gastropoda: Nudibranchia) in the Adriatic Sea. *Annales, Series Historia Naturalis* 33: 271–276. <https://doi.org/10.19233/ASHN.2023.33>
- García-Gómez, J. C., Cervera, J. L. & Díaz, J. 2011. Familia Goniadorididae. In: Gofas, S., Moreno, D. & Salas, C. (eds) *Moluscos marinos de Andalucía II*. Málaga (Universidad de Málaga, Servicio de Publicaciones e Intercambio Científico).
- Melzer, R. R., Pfannkuchen, M., Dujmovič, S., Mavrič, B. & Heß, M. 2023. First record of the golden coral shrimp, *Stenopus spinosus* Risso, 1827, in the Gulf of Venice. *Annales, Series Historia Naturalis* 33: 113–118. <https://doi.org/10.19233/ASHN.2023.15>
- Mavrič, B., Schliewen, U., Heß, M., Hervat, M. & Melzer, R. 2025. First record for the Gulf of Venice: Mediterranean Cardinal fish, *Apogon imberbis* (Linnaeus, 1758), spotted in the Brijuni Marine Protected Area and marine caves at the slopes of Banjol Island (Croatia) (Teleostei, Apogonidae). *Spixiana* 47: 259–260.
- Paz-Sedano, S., Moles, J., Smirnov, D., Gosliner, T. M., & Pola, M. 2024. A combined phylogenetic strategy illuminates the evolution of Goniadorididae nudibranchs (Mollusca, Gastropoda, Heterobranchia). *Molecular Phylogenetics and Evolution* 192: 107990.
- Paz-Sedano, S., Ortigosa, D. & Pola, M. 2017. A new *Okenia* Menke, 1830 from the Azores Islands, Portugal (Mollusca, Nudibranchia, Goniadorididae). *Spixiana* 40: 13–22.
- Pola, M., Paz-Sedano, S., Macali, A., Minchin, D., Marchini, A., Vitale, F., Licchelli, C. & Crocetta, F. 2019. What is really out there? Review of the genus *Okenia* Menke, 1830 (Nudibranchia: Goniadorididae) in the Mediterranean Sea with description of two new species. *PLoS ONE* 14(5): e0215037. <https://doi.org/10.1371/journal.pone.0215037>
- Pontes, M. & Madrenas, E. 2021. First records of the NE Atlantic nudibranch *Okenia picoensis* Paz-Sedano, Ortigosa & Pola, 2017 (Gastropoda, Goniadorididae) in the Mediterranean Sea. Pp. 186–187 in: *New alien Mediterranean biodiversity records* (March 2021). *Mediterranean Marine Science* (Athens, Greece) 22.
- Pontes, M., Madrenas, E., Garcia-Tort, A., Espada, O. & Ballesteros, M. 2025. Sea slugs (Mollusca, Gastropoda, Heterobranchia) from the Medes Islands (Costa Brava, NE Spain): biodiversity and ecological study over a decade. *Diversity* 17: 606.
- Trainito, E., Migliore, V. & Doneddu, M. 2022. How many seas must a nudibranch sail? *Okenia picoensis* (Mollusca: Nudibranchia: Goniadorididae) conquering the Mediterranean. *Studia Marina* 35(1): 15–25. <https://doi.org/10.5281/zenodo.6676729>

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