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Assessing Habitat Suitability and Distribution Patterns of the Invasive Brachyuran Crabs *Callinectes sapidus* and *Portunus segnis* in the Mediterranean Basin

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Suppl. Data 1: References of *Callinectes sapidus* and *Portunus segnis* occurrences in the Mediterranean Sea.

- Bardelli, R., Mancinelli, G., Mazzola, A., Vizzini, S. 2023. The Atlantic blue crab *Callinectes sapidus* spreading in the Tyrrhenian Sea: evidence of an established population in the Stagnone di Marsala (Sicily, southern Italy). *NAŠE MORE*, 70, 177-183.
- Battisti, C., Chiesa, S., Gallitelli, L., Scalici, M., 2023. Further evidence of the occurrence of the Atlantic blue crab *Callinectes sapidus* (Rathbun 1896) (Crustacea: Decapoda: Portunidae) along the central Tyrrhenian coast. *Natural History Sciences*, 10 (2), 63-68.
- Benabdi, M., Belmahi, A. E., Grimes, S., 2019. First record of the Atlantic blue crab *Callinectes sapidus* Rathbun, 1896 (Decapoda: Brachyura: Portunidae) in Algerian coastal waters (southwestern Mediterranean). *BioInvasions Records*, 8, 119-122.
- Cerri, J., Chiesa, S., Bolognini, L., Mancinelli, G., Grati, F. *et al.*, 2020. Using online questionnaires to assess marine bio-invasions: a demonstration with recreational fishers and the Atlantic blue crab *Callinectes sapidus* (Rathbun, 1986) along three Mediterranean countries. *Marine Pollution Bulletin*, 156, 111209.
- Chartosia, N., Anastasiadis, D., Bazairi, H., Crocetta, F., Deidun, A. *et al.*, 2018. New Mediterranean biodiversity records (July 2018). *Mediterranean Marine Science*, 9 (2), 398-415.
- Chebaane, S., Sempere Valverde, J., Dorai, S., Kacem, A., Sghaier, Y.R., 2019. A preliminary inventory of alien and cryptogenic species in Monastir Bay, Tunisia: spatial distribution, introduction trends and pathways. *Mediterranean Marine Science*, 20 (3), 616-626.
- Corsini-Foka, M., Abdulghani, A., Al Mabruk, S.A., Abdulraziq, A. A., Ibrahim, S.M. *et al.*, 2022. Invasive portunid crabs in Libyan waters: first record of the Atlantic blue crab *Callinectes sapidus* Rathbun, 1896 and range expansion of the swimming blue crab *Portunus segnis* (Forskål, 1775). *BioInvasions Records*, 10 (4), 885-893.
- Crocetta, F., Al Mabruk, S. A., Azzurro, E., Bakiu, R., Bariche, *et al.*, 2021. New alien Mediterranean biodiversity records. *Mediterranean Marine Science*, 22 (3), 724-746.
- Falsone, F., Scannella, D., Geraci, M.L., Vitale, S., Sardo, G. *et al.*, 2020. Further records of *Callinectes sapidus* (Rathbun, 1896) (Decapoda, Brachyura, Portunidae) in the Strait of Sicily. *Marine Biodiversity Records*, 13 (1), 8.
- Garcia, L., Pinya, S., Colomar, V., París, T., Puig, M. *et al.*, 2018. The first recorded occurrences of the invasive crab *Callinectes sapidus* Rathbun, 1896 (Crustacea: Decapoda: Portunidae) in coastal lagoons of the Balearic Islands (Spain). *BioInvasions Records*, 7, 191-196.
- Giacobbe, S., Piccolo, M., Scaduto, G., 2019. Forty-seven years later: the blue crab *Callinectes sapidus* Rathbun, 1896 (Crustacea Decapoda Portunidae) reappears in the Strait of Messina (Sicily, Italy). *Biodiversity Journal*, 10, 365-368.
- Grati, F., Froglija, C., Souissi, J.B., 2023. The blue swimming crab *Portunus segnis* (Forskål, 1775) reaches the Adriatic Sea: a distant and disjointed occurrence. *BioInvasions Records*, 12, 10.3391.
- Insacco, G., Zava, B., 2017. First record of the Blue Crab *Callinectes sapidus* in Sicily. *Mediterranean Marine Science*, 18 (1), 179-201.
- Karaa, S., Enajjar, S., Glid, A., Bradai, M.N., 2018. The first record of the barnacle *Chelonibia patula* (Ranzani, 1818), hosted by the swimming crab *Portunus segnis* (Forskål, 1775) in the gulf of Gabes. *INSTM Bulletin: Marine and Freshwater Sciences*, 45, 89-91.
- Katsanevakis, S., Poursanidis, D., Hoffman, R., Rizgalla, J., Rothman, S.B. *et al.*, 2020. Unpublished Mediterranean records of marine alien and cryptogenic species. *BioInvasions Records*, 9, 165-182.
- Lipej, L., Rogelja, M., 2021. Status of the invasive blue crab *Callinectes sapidus* Rathbun, 1896 (Brachyura: Portunidae) in Slovenia. *Acta Biologica Slovenica*, 64, 24-34.
- Mancinelli, G., Chainho, P., Cilenti, L., Falco, S., Kapiris, K. *et al.*, 2017. The Atlantic blue crab *Callinectes sapidus* in southern European coastal waters: Distribution, impact and prospective invasion management strategies. *Marine pollution bulletin*, 119(1), 5-11.
- Marras, S., Domenici, P., 2011. Schooling behaviour reduces predation risk in blue crabs, *Callinectes sapidus*. *Animal Behavior*, 82, 239-243.
- Mili, S., Tlig-Zouari, S., Benabdelmouna, A., 2017. Recent records of the crab *Callinectes sapidus* Rathbun, 1896 (Decapoda: Brachyura: Portunidae) from the lagoon of Bizerte (northern Tunisia). *Aquatic Invasions*, 12, 473-478.

- Özcan, T., 2012. The swimming crab *Portunus segnis* (Forskål, 1775): host for the barnacle *Chelonibia platula* (Ranzani, 1818) from the Turkish coast. *Journal of Black Sea/Mediterranean Environment*, 18(3), 271-278.
- Özgül, A., Akyol, O., 2019. Occurrence of a Lessepsian Swimming Crab, *Portunus segnis* (Crustacea: Decapoda), in Southern Aegean Sea, Turkey. In *Annales: Series Historia Naturalis*, 29(1), 43-48.
- Rabaoui, L., Arculeo, M., Mansour, L., Tlig-Zouari, S., Fahd, K., *et al.*, 2015. Occurrence of the lessepsian species *Portunus segnis* (Crustacea: Decapoda) in the Gulf of Gabes (Tunisia): first record and new information on its biology and ecology. *Cahiers de Biologie Marine*, 56(2), 169-175.
- Ragkousis, M., Zenetos, A., Souissi, J. B., Hoffman, R., Ghanem, R., *et al.*, 2023. Unpublished Mediterranean and Black Sea records of marine alien, cryptogenic, and nonative species. *Bioinvasions records*, 12(2), 339-369.
- Ragkousis, M., Abdelali, N., Azzurro, E., Badreddine, A., Bariche *et al.*, 2020. *New alien Mediterranean biodiversity records*, 21(3), 631-652.
- Scirocco, T., Scannella, D., Falsone, F., Geraci, M.L., Fiorentino, F., 2019. The Atlantic blue crab *Callinectes sapidus* (Rathbun, 1896) in the Strait of Sicily: updated records and potential ecological impacts. *Aquatic Invasions*, 14, 132-138.
- Shaiek, M., El Zrelli, R., Crocetta, F., Mansour, L., Rabaoui, L., 2021. On the occurrence of three exotic decapods, *Callinectes sapidus* (Portunidae), *Portunus segnis* (Portunidae), and *Trachysalambria palaestinensis* (Penaeidae), in northern Tunisia, with updates on the distribution of the two invasive portunids in the Mediterranean Sea. *BioInvasions Records*, 10(1), 158-169.
- Shakman, E., Eteayb, K., Taboni, I., Abdalha, A. B., 2019. Status of marine alien species along the Libyan coast. *Journal of the Black Sea/Mediterranean Environment*, 25(2), 188-209.
- Spartà, M., Giuliani, S., 2015. First records of the Atlantic blue crab *Callinectes sapidus* Rathbun, 1896 (Crustacea, Decapoda, Portunidae) from the coast of Tuscany, Italy. *Marine Biodiversity Records*, 8, 485-491.
- Tiralongo, F., Lillo, A., 2018. New record of the Atlantic blue crab *Callinectes sapidus* Rathbun, 1896 (Crustacea: Decapoda: Portunidae) from eastern Sicily (Ionian Sea). *Acta Adriatica*, 59, 203-206.
- Tsirintanis, K., Konstantinidis, E., Klaoudatos, D., Perdikaris, C., 2018. First report of *Callinectes sapidus* Rathbun, 1896 (Crustacea: Decapoda: Portunidae) from the Ionian Sea (western Greece). *Journal of Biological Research (Thessalon)*, 25, 12.
- Vella, A., Giarrusso, E., Monaco, C., Mifsud, C. M., Darmanin, S. A., *et al.*, 2023. New records of *Callinectes sapidus* (Crustacea, portunidae) from Malta and the san leonardo river estuary in sicily (Central mediterranean). *Diversity*, 15(5), 679.
- Yokes, B., Galil, B.S., 2006. First record of the invasive crab *Callinectes sapidus* Rathbun, 1896 (Crustacea: Decapoda: Portunidae) from the Antalya Bay, Turkey. *Aquatic Invasions*, 1, 74-75.