

Acta Adriatica 66 (2025)
<https://doi.org/10.32582/aa.66.1.8>

SUPPLEMENTARY MATERIAL

Using citizen science to understand the recreational fishing impact on elasmobranch along the Italian Northern Adriatic coast

Jacopo Bernardi^{1,2}, Carlotta Mazzoldi^{2,3} and Giulia Bressan^{3,4*}

¹*Experimental Center for Habitats Conservation (CESTHA), Marina di Ravenna (RA), Italy*

²*Department of Biology, University of Padova, Padova, Italy*

³*National Biodiversity Future Center (NBFC), Palermo, Italy*

⁴*Department of Earth and Marine Science (DiSTeM), University of Palermo, Palermo, Italy*

*corresponding author: giulia.bressan@community.unipa.it

Questionnaire about recreational fishing on sharks and rays in the Venice Lagoon

Recreational fishermen are a fundamental resource for understanding the presence of species usually not reported by commercial fishing in the Northern Adriatic.

We invite you to fill out this questionnaire, for the purposes of a research carried out by the Department of Biology of the University of Padova, about the presence of sharks and rays in the lagoon habitat.

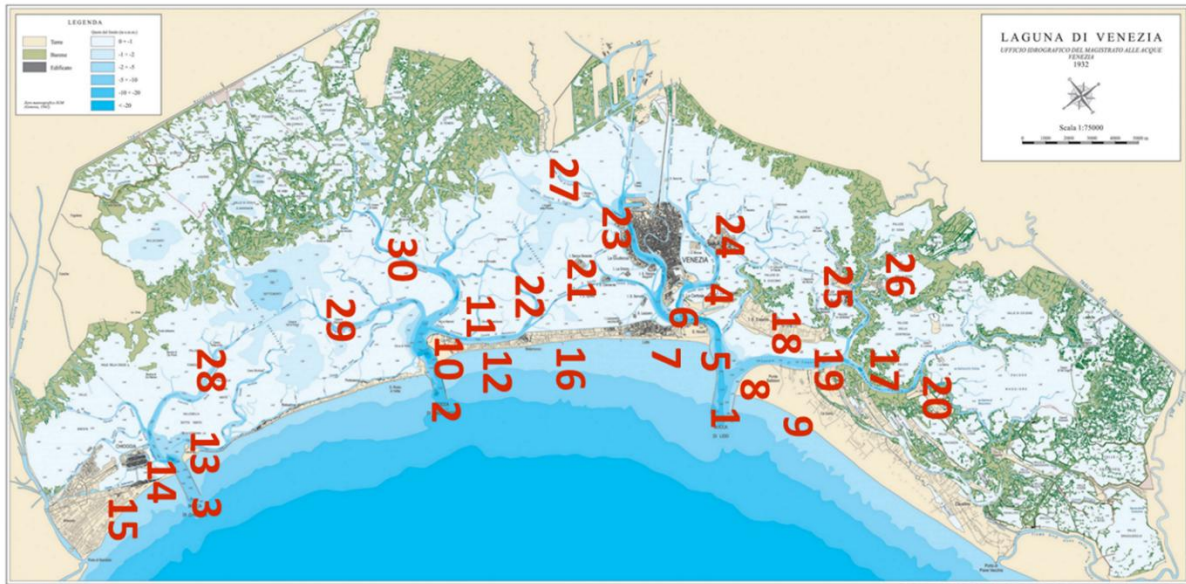
Thank you!

The questionnaire is ANONYMOUS. The information will be processed in compliance with the principles of protection of personal data (Legislative Decree 196/2003, Legislative Decree 101/2018, EU Reg. n. 679/2016, GDPR).

1. Age (short answer)
2. How long have you been practicing recreational fishing (short answer)?
3. Do you fish from the shore or boat?
 - a. Shore
 - b. Boat
 - c. Both
4. In which area do you usually fish? (Check all viable options) (see MAP)

Modified, from:

Ufficio Idrografico del Magistrato alle Acque di Venezia, 1932



- a. 1. Malamocco Inlet
- b. 2. Lido Inlet
- c. 3. Chioggia Inlet
- d. 4. Sant'Andrea
- e. 5. San Nicolò breakwater barrier
- f. 6. San Nicolò shoreline
- g. 7. San Nicolò beach
- h. 8. Punta Sabbioni breakwater barrier
- i. 9. Punta Sabbioni beach
- j. 10. Alberoni breakwater barrier
- k. 11. Alberoni shoreline
- l. 12. Alberoni beach
- m. 13. Cà Roman breakwater barrier
- n. 14. Sottomarina breakwater barrier
- o. 15. Sottomarina/Rosolina beach
- p. 16. Murazzi breakwater barrier
- q. 17. San Felice channel
- r. 18. Treporti
- s. 19. Sant'Erasmo
- t. 20. Lio Piccolo channel
- u. 21. Santo Spirito channel
- v. 22. Poveglia
- w. 23. Giudecca
- x. 24. Murano
- y. 25. Burano
- z. 26. Torcello
- aa. 27. Fusina
- bb. 28. Peregnola channel

- cc. 29. Valgrande channel
- dd. 30. Melison channel
- ee. Northern Lagoon
- ff. Central Lagoon
- gg. Southern Lagoon
- hh. Shore (general)
- ii. Open water
- jj. Jesolo
- kk. Caorle
- ll. Other (e.g. Albarella, Porto Levante, Porto Barricata, Porto Garibaldi...)

5. How many times do you fish in a season?

	Never	Once at month	Once every two weeks	Once a week	Twice a week	>Twice a week
Autumn						
Winter						
Spring						
Summer						

6. How many hours do you fish in a fishing trip? (short answer)

7. Do you fish by day or by night?

- a. Day
- b. Night
- c. Both

8. In which environmental conditions do you prefer to fish?

- a. Rising/high tide
- b. Tide change
- c. Decreasing/low tide
- d. Slack tide
- e. New moon
- f. Full moon
- g. Other

9. How many rods do you use?

- a. 1
- b. 2
- c. 3
- d. 4
- e. >4

10. Which are your target species (Check all viable options)

- a. European seabass
- b. Mullet
- c. Brown meagre
- d. Leerfish
- e. Striped seabream
- f. Shy drum
- g. Seabream
- h. Smoothhound
- i. Bluefish
- j. Skates and rays
- k. Common sole
- l. Spiny dogfish
- m. Horse mackerel
- n. Other

11. Which hook size and bait do you use for your target species? (Short answer)

12. Have you ever fished this species (Smoothhound)? (see PHOTO)



- a. Yes
- b. No
- c. Only once

13. If yes, how many for fishing trips? (Short answer)

14. In which period do you catch smoothhounds? Which size? (Check all viable options)

	Small (30-50 cm)	Medium (50-100 cm)	Large (>100 cm)
Autumn			
Winter			
Spring			
Summer			

15. In which environmental conditions do you catch smoothhounds?

- a. Rising/high tide
- b. Tide change
- c. Decreasing/low tide
- d. Slack tide
- e. New moon
- f. Full moon
- g. Other

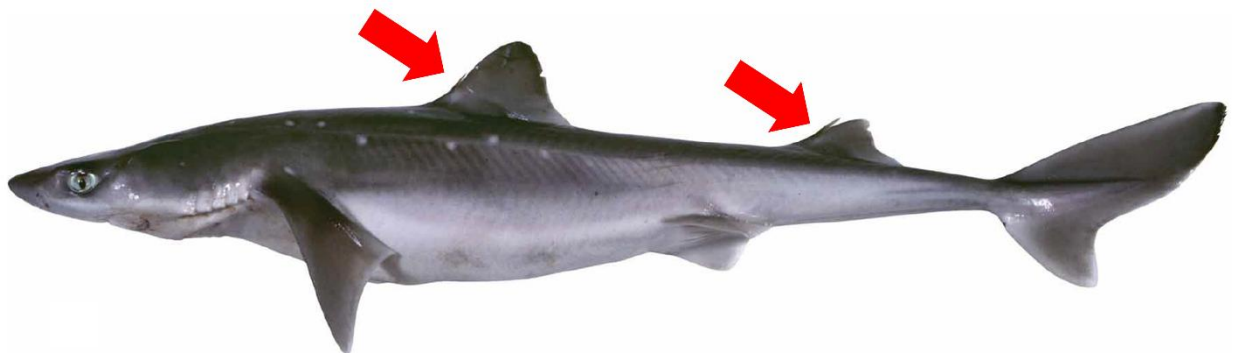
16. With which hook size and bait do you catch smoothhounds? (Short answer)

17. In which area of the lagoon/sea do you catch more smoothhounds? At which depth? (Short answer)

18. Have you ever fish this species (spiny dogfish)? (see PHOTO)

Modified, from:

Ebert, D.A., W.T. White, K.J. Goldman, L.J.V. Compagno, T.S. Daly-Engel, and R.D. Ward. 2010. Resurrection and redescription of *Squalus suckleyi* (Girard, 1854) from the North Pacific, with comments on the *Squalus acanthias* subgroup (Squaliformes: Squalidae). *Zootaxa* 2612, 22–40.



- a. Yes
- b. No
- c. Only once

19. If yes, how many for fishing trips? (Short answer)

20. In which period do you catch spiny dogfishes? Which size? (Check all viable options)

	Small (30-50 cm), <1kg	Medium (50-100 cm), 1-3 kg	Large (>100 cm), >3kg
Autumn			
Winter			
Spring			
Summer			

21. In which environmental conditions do you catch spiny dogfishes?

- a. Rising/high tide
- b. Tide change
- c. Decreasing/low tide
- d. Slack tide
- e. New moon
- f. Full moon
- g. Other

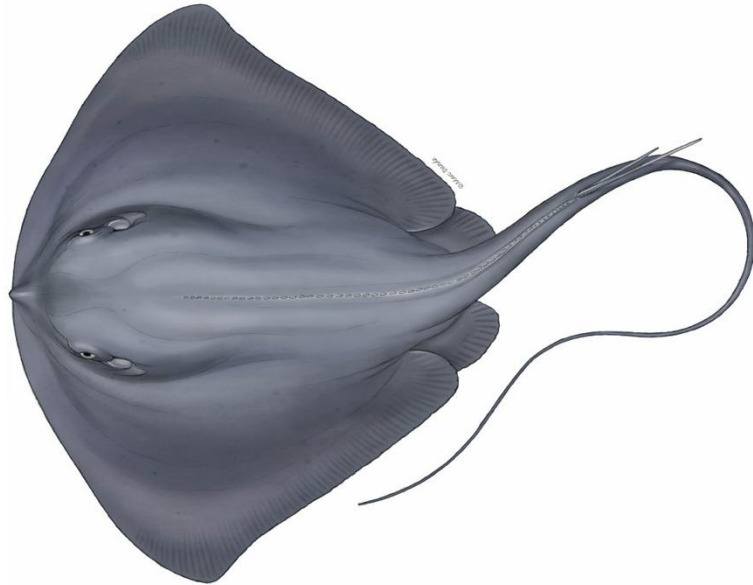
22. With which hook size and bait do you catch spiny dogfishes? (Short answer)

23. In which area of the lagoon/sea do you catch more spiny dogfishes? At which depth?
(Short answer)

24. Have you ever fished one of these skate or ray species? (see PHOTOS)

From:

Ebert, D. A., & Dando, M. (2020). *Field guide to sharks, rays, and chimaeras of Europe and the Mediterranean*. Princeton University Press. <https://doi.org/10.1515/9780691211824>



Ebert, D. A., & Dano, M. (2020). *Field guide to sharks, rays, and chimaeras of Europe and the Mediterranean*. Princeton University Press. <https://doi.org/10.1515/9780691211824>



From:

Last, P., White, W., de Carvalho, M., Séret, B., Stehmann, M., & Naylor, G. (2016). *Rays of the world*. CSIRO Publishing



- a. Yes
- b. No
- c. Only once

25. If yes, how many for fishing trips? (Short answer)

26. In which period do you catch rays or skates? Which size? (Check all viable options)

	Small (30-50 cm)	Medium (50-100 cm)	Large (>100 cm)
Autumn			
Winter			
Spring			
Summer			

27. In which environmental conditions do you catch spiny rays or skates?

- a. Rising/high tide
- b. Tide change
- c. Decreasing/low tide
- d. Slack tide
- e. New moon
- f. Full moon
- g. Other

28. With which hook size and bait do you catch rays or skates? (Short answer)

29. In which area of the lagoon/sea do you catch more spiny rays or skates? At which depth? (Short answer)

30. If you catch a shark or a skate/ray, do you release it or consume it?

- a. Release
- b. Consume
- c. Consume only the small-size individuals
- d. Consume only the medium-size individuals
- e. Consume only the large-size individuals