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Short Communication

First documented sightings of shortnose guitarfish, *Zapteryx brevirostris* in Uruguayan coastal waters

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ABSTRACT. For the first time, underwater videos and photos recorded the presence of shortnose guitarfish (*Zapteryx brevirostris*) in shallow waters of the Uruguayan Atlantic coast. Sightings of this endangered species were scientifically confirmed by current (2025) and previous records (1999, 2024), which highlight the daytime presence of alive specimens at La Paloma (Rocha Province) and José Ignacio (Maldonado Province). Isolated individuals were detected over rocky formations, while aggregations were associated with sandy bottom. The undefined aggregations could occur year-round or seasonally in this zone. However, more research is required to ecologically link these aggregations to the species' possible life-history activity in the area.

Keywords: Rhinopristiformes; extinction risk; underwater sightings; southwest Atlantic

Rhinopristiformes is one of the most threatened orders within Elasmobranchii (Moore 2017, Jabado 2018, Dulvy et al. 2021). The genus *Zapteryx* Jordan & Gilbert, 1880 comprises three extant species (Last et al. 2016), of which the shortnose guitarfish *Zapteryx brevirostris* (Müller& Henle, 1841) is endemic to the southwest Atlantic (Weigmann 2016, Gomes et al. 2019). Within their latitudinal distribution range, from southeastern Brazil (ca. 19°S, Espírito Santo State) to southern Argentina (ca. 53°S, Malvinas Islands), *Z. brevirostris* appears to follow biogeographic patterns operating at an ecosystem level (Xavier et al. 2024). At the northern border (tropical waters), biotic factors, such as higher species richness, appear to affect the distribution of *Z. brevirostris* (Xavier et al. 2024), suggesting interspecific competition. Whereas at its southern border (temperate waters), abiotic drivers such as water temperature appear to play an ecological role in shaping its distribution limits (Xavier et al. 2024). This guitarfish is subjected to intense, mostly unmanaged fishing pressure across its limited range; it has no refuge at depth, and, where recorded in landings, it has declined (Pollom et al. 2020), indicating a negative anthropogenic effect on the abundance of this small-sized elasmobranch by coastal fisheries.

Across *Z. brevirostris*' geographic range, the bulk of species records come from dead individuals obtained from various sources (scientific collections, recreational fishers, fisheries data, and on-board observations from scientific cruises or artisanal and industrial fish-

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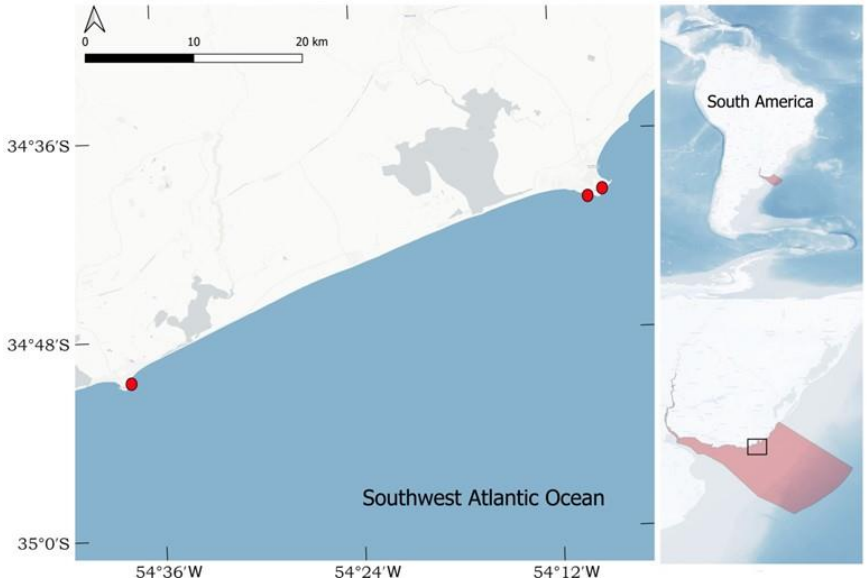

Figure 1. Uruguayan coastal waters (southwest Atlantic), where sightings of *Zapteryx brevirostris* occurred. Dive sites (red circles) off La Paloma (Rocha) and José Ignacio (Maldonado) are indicated.

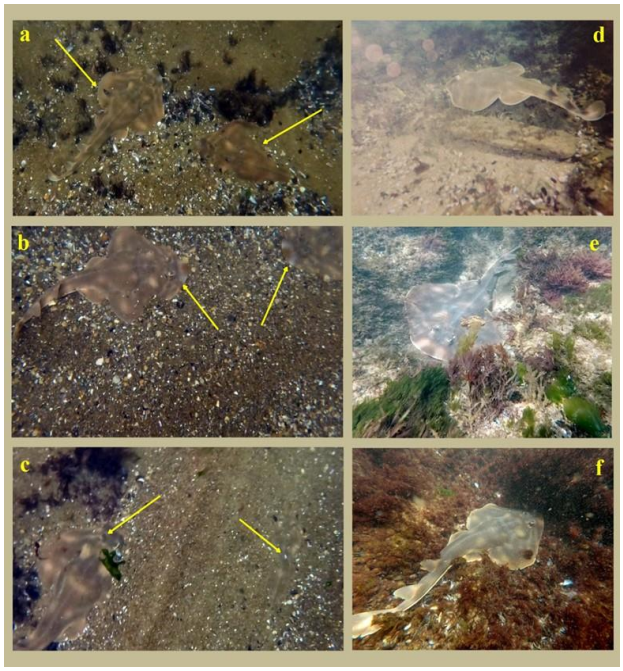

Figure 2. Documented sightings of *Zapteryx brevirostris*. a-c) aggregations on sandy bottoms, d-f) isolated individuals swimming or on rocky formations. The current records (a-c) were obtained by A. Loureiro (March 2025 using a digital system). The previous records (d-f) were obtained by A. Demicheli (February 1999, using an analogical system: d; October 2024, using a digital system: e-f). Yellow arrows indicate the position of the individuals.

eries fleets). For the first time, we reported *in situ* sightings of *Z. brevirostris* at the middle of the species' distribution. Here, we compiled scientific evidence of living individuals in shallow waters (deep range: 0.5-7.0 m; maximum visibility: 7 m), along the Uruguayan Atlantic coast, using current (March/2025) and previous (February/1999, October/2024) records from underwater videos and photos. The presence of the species was detected in bays and coastal habitats through free-diving parallel to the coastline off La Paloma (Rocha Province) and José Ignacio (Maldonado Province) (Fig. 1). The species was observed in aggregations in depression zones of the sandy bottom (up to 22 specimens registered in one site; see Table S1) where some individuals were buried and camouflaged. In other cases, isolated individuals were observed on hard substrates (i.e. rocky formations) (Fig. 2). The undefined aggregations could occur year-round or seasonally in this zone. However, more research is required to establish the duration of the aggregations and any possible link to a vital function or life-history activity of the species. Local constraints (biotic or abiotic drivers) affecting the species' behavior need to be understood. Also, we highlight possible size variation among aggregated individuals. This inference should be confirmed or discarded using video or photo images, allowing the reconstruction of an entire view of each animal to estimate their total length.

According to Pollom et al. (2020), there are no species-specific protections or conservation measures in place for this endangered and overfished species, with a declining population size (50-79% over the past three generation lengths - 21 years). Nowadays, it is imperative to implement actions that link conservation measures with education and awareness programs, or to deepen research and monitoring, as well as harvest management and trade controls. Even co-management strategies between countries, such as Brazil, Uruguay, and Argentina, that fall within the geographic range of *Z. brevirostris* should be considered and implemented.

Credit author contribution

R. Vögler: conceptualization, data field collection, writing, first draft and revised version, supplementary material, edition and figures; A. Loureiro: data field collection, writing, revised version, writing, supplementary material, edition and figures; A.C. Milessi: conceptualization, funding acquisition, project administration, review, first draft and revised version; Á. Demicheli: data field collection, review, first draft and revised version. All authors have read and accepted the published version of the manuscript.

Conflict of interest

The authors declare that they have no conflicts of interest.

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Table S1. Monitoring the *Zapteryx brevirostris* presence in Uruguayan coastal waters.

Date	Site	Diving	Diving type	Video	Video time	Individuals (n°)	Behaviour	Comments	Sea bed type
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:01:38	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:01:53	1	escape		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:01:54,5	3	motionless	buried and camouflaged	sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:01:58	1	escape		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:02:01	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:02:03	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:02:04,5	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:02:35,5	2	motionless	buried and camouflaged	sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:02:38	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:02:42	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:02:42,5	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:02:43,5	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:02:44,5	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:03:42,5	2	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:03:46,5	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:03:58,2	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:04:08,5	1	motionless		sand
3-11-2025	B Ch, La Paloma	1	Free diving	GX010927.MP4	1:08:41	1	motionless		sand

B Ch: Bahía Chica