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AN INSIGHT INTO THE HETEROBRANCH FAUNA OF FIESA (SLOVENIA, NORTHERN ADRIATIC SEA)

Tea KNAPIČ
Slovenian Natural History Museum, Prešernova cesta 20, 1000 Ljubljana, Slovenia

Irena FRKOVIČ
Jenkova ulica 1, 6000 Koper, Slovenia

Borut MAVRIČ
Marine Biology Station Piran, National Institute of Biology, Piran, Fornače 41, 6330 Piran, Slovenia

Lovrenc LIPEJ
Marine Biology Station Piran, National Institute of Biology, Piran, Fornače 41, 6330 Piran, Slovenia
FAMNIT, University of Primorska, 6000 Koper, Slovenia

ABSTRACT

The authors investigated the marine heterobranch fauna (Heterobranchia, Gastropoda) in Fiesa, a tourist destination and one of the most popular diving sites in the Gulf of Trieste (northern Adriatic Sea). Specimens of heterobranchs were collected during sporadic sampling between November 2021 and January 2022. A total of 30 species from 6 higher taxa (Cephalaspidea 1, Aplysiida 1, Umbraculida 1, Sacoglossa 3, Pleurobranchida 2, Nudibranchia 22) were recorded and identified. Including previously published and recorded data, the total number of species currently known in the study area has increased to 51. Future surveys, involving additional sampling methods and carried out during other seasons of the year, are expected to further increase the number of recorded marine heterobranch species inhabiting the area.

Key words: marine heterobranchs, checklist, SCUBA diving, Fiesa, recreational divers

UNO SGUARDO ALLA FAUNA DEGLI ETEROBRANCHI DI FIESSO (SLOVENIA, ADRIATICO SETTENTRIONALE)

SINTESI

Gli autori hanno studiato la fauna marina di eterobranchi (Heterobranchia, Gastropoda) a Fiesso, una destinazione turistica e uno dei siti di immersione più popolari del Golfo di Trieste (Adriatico settentrionale). Gli esemplari di eterobranchi sono stati raccolti durante campionamenti sporadici tra novembre 2021 e gennaio 2022. In totale sono state registrate e identificate 30 specie appartenenti a 6 taxa superiori (Cephalaspidea 1, Aplysiida 1, Umbraculida 1, Sacoglossa 3, Pleurobranchida 2, Nudibranchia 22). Includendo i dati pubblicati e registrati in precedenza, il numero totale di specie attualmente conosciute nell'area di studio è salito a 51. Le indagini future, che prevedono ulteriori metodi di campionamento e che saranno condotte in altre stagioni dell'anno, dovrebbero aumentare ulteriormente il numero di specie di eterobranchi marini registrate nell'area.

Parole chiave: eterobranchi marini, lista, immersioni, Fiesso, subacquei ricreativi

INTRODUCTION

The first checklist of marine gastropod fauna in the Gulf of Trieste (northern Adriatic Sea) including information on heterobranchs was published over 120 years ago (Graeffe, 1903). The earliest reports for the Slovenian part of the gulf date to the late 20th century and are based on the works of De Min & Vio (1997). The number of heterobranch species reported at the time was limited, as samples were mainly collected using sedimentary bottom sampling gear such as Van Veen and Petersen grabs. Later, a first checklist specifically focused on marine sea slugs was published (Turk, 2000), followed by several other studies aimed at assessing the heterobranch fauna in the area, which resulted in a rapidly increasing number of recorded species (Turk, 2005; Lipej *et al.*, 2008, 2012; Mavrič & Lipej, 2012; Lipej *et al.*, 2014; Zenetos *et al.*, 2016). According to Ciriaco & Poloniato (2016), at least 73 species have been recorded in the Italian part of the Gulf of Trieste, while the Slovenian part has recorded 141 species to date (Lipej *et al.*, 2018).

The aim of the present work is to provide the first list of marine heterobranchs for Fiesa, one of the sites in the Gulf of Trieste most frequented by recreational divers.

MATERIAL AND METHODS

Study area

The Slovenian coastline is relatively short, covering only 46 km. Fiesa (45°31′31.0″ N 13°34′53.9″ E) is a quiet bay located between Piran and Strunjan (Fig. 1), lined on both sides by the steep walls of a flysch cliff. The sea bed begins with a shallow stony-sandy plain, transitioning at a depth of 4–5 m into a distinct flysch sill, and changing at 8–9 m to a silty sandy bottom interspersed with patches of biogenically hardened substrate (Fig. 2). The silty sandy bottom slowly descends to a maximum depth of 18 m, with the precoralligenous type of biogenic formation in this area supporting a wide range of habitat types that play an important role biodiversity.

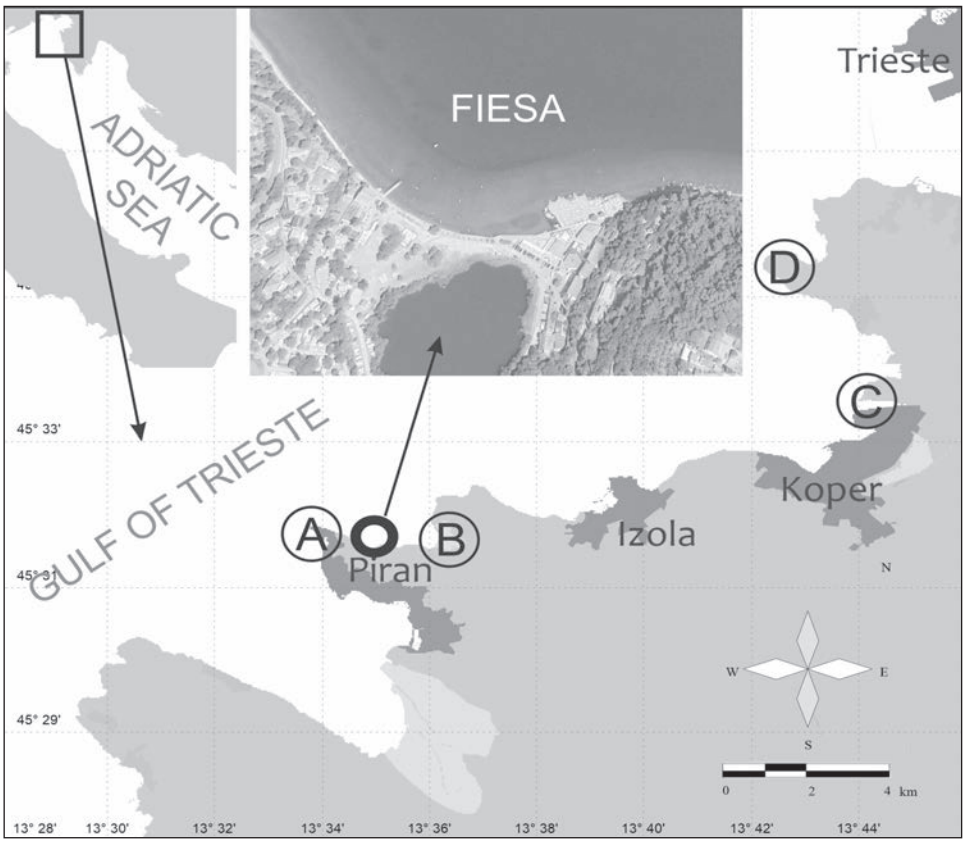

Fig. 1: The studied locality of Fiesa (right above) and its position in the Adriatic Sea (left above) as well as in the Slovenian part of the Adriatic Sea (below), along with the areas to which it was compared: A – waters off the old town of Piran, B – Stjuža lagoon (Strunjan), C – Koper harbour, and D – Nature Monument Debeli rtič (Ankaran).
Sl. 1: Raziskovana lokaliteta Fiesa (desno zgoraj) in njena lega v Jadranskem morju (levo zgoraj) in v slovenskem delu Jadranskega morja (spodaj), skupaj z območji, s katerimi je bila primerjana: A – akvatorij ob starem mestnem jedru Pirana, B – laguna Stjuža (Strunjan), C – koprsko pristanišče in D – Naravni spomenik Debeli rtič (Ankaran).

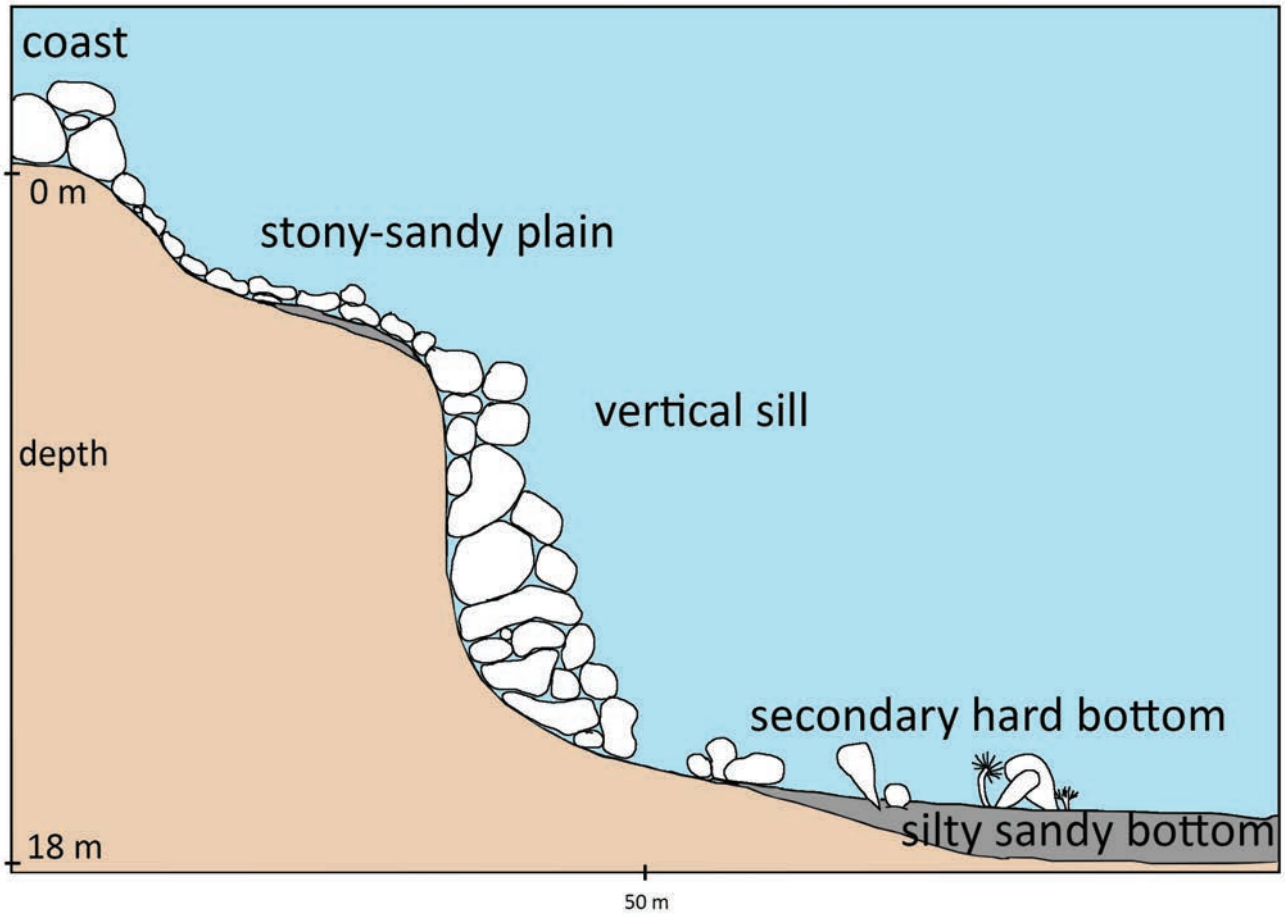

Fig 2: Cross-section of the main habitats present in the studied area across the depth range.
Sl. 2: Prečni prerez glavnih habitatov, prisotnih na proučevanem območju v globinskem razponu.

The present work is based on data collected during 12 recreational scuba diving trips in Fiesa between November 2021 and January 2022. All dives were conducted at night, with a maximum depth of 12 m (the boundary between rocky and sandy bottoms), and water temperatures varying from 17°C in November to 8°C in January. Data was collected by documenting the sightings of each species and photographing them using an Olympus TG6 underwater camera. Photographs of each sighting were re-examined to confirm identification and make other observations. No attempt was made to preserve collected or sighted specimens.

Specimens were identified based on their external morphology as observed in detailed photographs and through comparison with relevant literature (Schmekel & Portmann, 1982; Trainito & Doneddu, 2014; Lipej *et al.*, 2018; Prkič *et al.*, 2018). To determine whether a species could be considered a new record for the study area, the data on heterobranch species reported by Lipej *et al.* (2018) were consulted. The taxonomy and nomenclature conform to the World Register of Marine Species - WoRMS (2024). For a detailed survey of heterobranch fauna in the studied area, other available data published in previous studies (Lipej *et al.*, 2008, 2012, 2014, 2018) or obtained through social media were analysed. The number of species recorded in Fiesa was compared with those reported from other areas (Fig. 1), such as the Natural Monument of Debeli rtič (Lipej *et al.*, 2016), the Stjuža lagoon in Strunjan (Lipej *et al.*, 2019), the area of the Port of Koper (Lipej *et al.*, 2020), and the waters off the old town of Piran (Lipej *et al.*, 2022).

RESULTS AND DISCUSSION

Heterobranch fauna

A total of 30 heterobranch species from six higher taxonomic groups (Cephalaspidea 1, Aplysiida 1, Umbraculida 1, Sacoglossa 3, Pleurobranchida 2, Nudibranchia 22) were recorded and identified in this study, six of which are new records for Fiesa: *Eubranchus viriola* (Korshunova, Malmberg, Prkić, Petani, Fletcher, Lundin & Martynov, 2020), *Idaliadoris depressa* (Alder & Hancock, 1842), *Berthella plumula* (Montagu, 1803),

Tab. 1: Heterobranch species recorded in the study area in the period November 2021–January 2022. The plus signs denote an estimate of heterobranch abundance.
Tab. 1: Zabeležene vrste polžev zaškrgarjev na obravnavanem območju v obdobju november 2021–januar 2022. Znaki plus označujejo oceno številčnosti polžev zaškrgarjev.

	date/ species		2021								2022		
		21 nov	27 nov	29 nov	4 dec	5 dec	12 dec	15 dec	26 dec	29 dec	9 jan	15 jan	22 jan	30 jan
1	*Antiopella cristata*						1							
2	*Amphorina linensis*							1						
3	*Aplysia punctata*			1					2				3	5
4	*Berthella ocellata*										1			
5	*Berthella plumula*					1								
6	*Cratena peregrina*			5		3	2	2		1				
7	*Dendrodoris grandiflora*							1			1		4	1
8	*Dendrodoris limbata*		1				1	1	1			2	2	3
9	*Discodoris rosi*									1	1			
10	*Doris pseudoargus*	1			2		2	4						
11	*Doris sp.*					1					1			
12	*Elysia gordanae*											1	1	1
13	*Elysia timida*					1			1					
14	*Elysia viridis*							5+	5+		5+	10+	10+	10+
15	*Facelina fusca*			5+	5+	5+	5+	5+	10+	5+			10+	10+
16	*Eubranchus viriola*							5		2				
17	*Felimare picta*	3	2	1		5+	1	2	1			1	1	1
18	*Felimare villafranca*	1		2	1		4	1	1					1
19	*Felimida krohni*													1
20	*Felimida luteorosea*	1												
21	*Geitodoris planata*												1	
22	*Idaliadoris depressa*													2
23	*Paraflabellina ischitana*					1								
24	*Philinopsis depicta*		1											
25	*Polycera quadrilineata*				1			1				1		
26	*Spurilla neapolitana*						1			1				
27	*Thuridilla hopei*					1								
28	*Trapania maculata*										1			
29	*Trapania lineata*										1			

Discodoris rosi Ortea, 1979, and *Philinopsis depicta* (Renier, 1807) (Tab. 1). The 31 heterobranch species recorded are presented in Figures 3 and 4.

The most notable new addition to the Fiesa heterobranch checklist may be *Eubranchus viriola*, which was described only recently, in 2020 (Korshunova *et al.*, 2020). Specimens were mainly translucent white; however, some brown specimens were also observed, distinguished from the similar species *Amphorina farrani* (Alder & Hancock, 1842) by the absence of a yellow-orange spot on the tail. During sampling, some specimens matching the description of the recently discovered species *Amphorina viriola* were found (Korshunova *et al.,* 2020). However, due to recent doubts regarding the distinction between similar species of the genus *Amphorina* and the validity of this genus, along with the

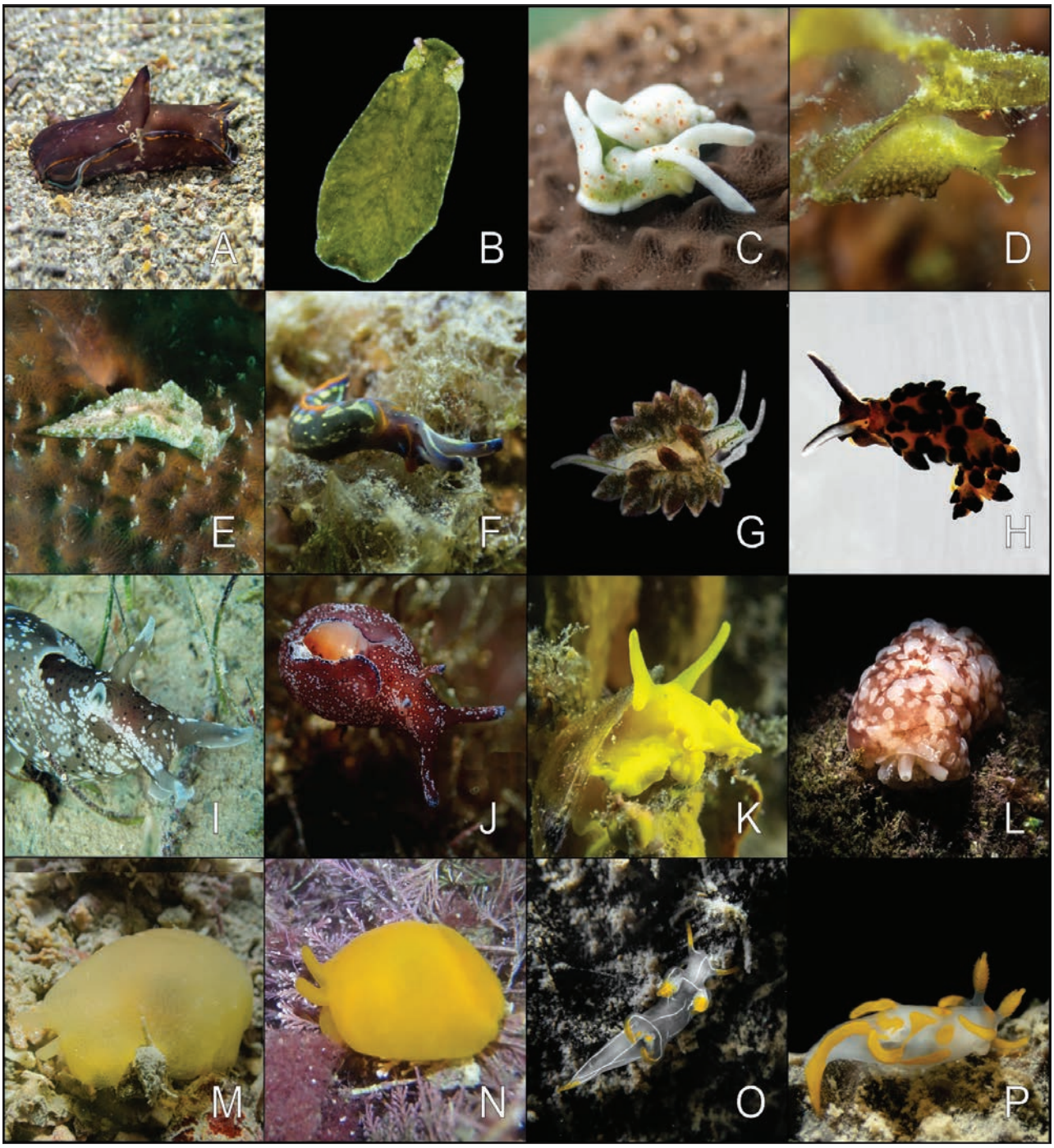

Fig. 3: Heterobranch species recorded in the study area. ***A*** *– Philinopsis depicta,* ***B*** *– Boselia mimetica,* ***C*** *– Elysia timida,* ***D*** *– Elysia viridis,* ***E*** *– Elysia gordanae,* ***F*** *– Thuridilla hopei,* ***G*** *– Ercolania viridis,* ***H*** *– Placida cremoniana,* ***I*** *– Aplysia punctata,* ***J*** *– a small specimen of Aplysia punctata (formerly Aplysia parvula),* ***K*** *– Tylodina perversa,* ***L*** *– Berthella ocellata,* ***M*** *– Berthella plumula,* ***N*** *– Berthellina edwardsi,* ***O*** *– Trapania lineata, and* ***P*** *– Trapania maculata* ***(Photos: Tea Knapič: A, C, D, F, K, L, M, O, P; Irena Frkovič: J; Borut Mavrič: B, E, G, H, I, N).***
SL. 3: Favna polžev zaškrgarjev na obravnavanem območju. ***A*** *– Philinopsis depicta,* ***B*** *– Boselia mimetica,* ***C*** *– Elysia timida,* ***D*** *– Elysia viridis,* ***E*** *– Elysia gordanae,* ***F*** *– Thuridilla hopei,* ***G*** *– Ercolania viridis,* ***H*** *– Placida cremoniana,* ***I*** *– Aplysia punctata,* ***J*** *– majhen primerek vrste Aplysia punctata (prej Aplysia parvula),* ***K*** *– Tylodina perversa,* ***L*** *– Berthella ocellata,* ***M*** *– Berthella plumula,* ***N*** *– Berthellina edwardsi,* ***O*** *– Trapania lineata, in* ***P*** *– Trapania maculata* ***(Fotografije: Tea Knapič: A, C, D, F, K, L, M, O, P; Irena Frkovič: J; Borut Mavrič: B, E, G, H, I, N).***

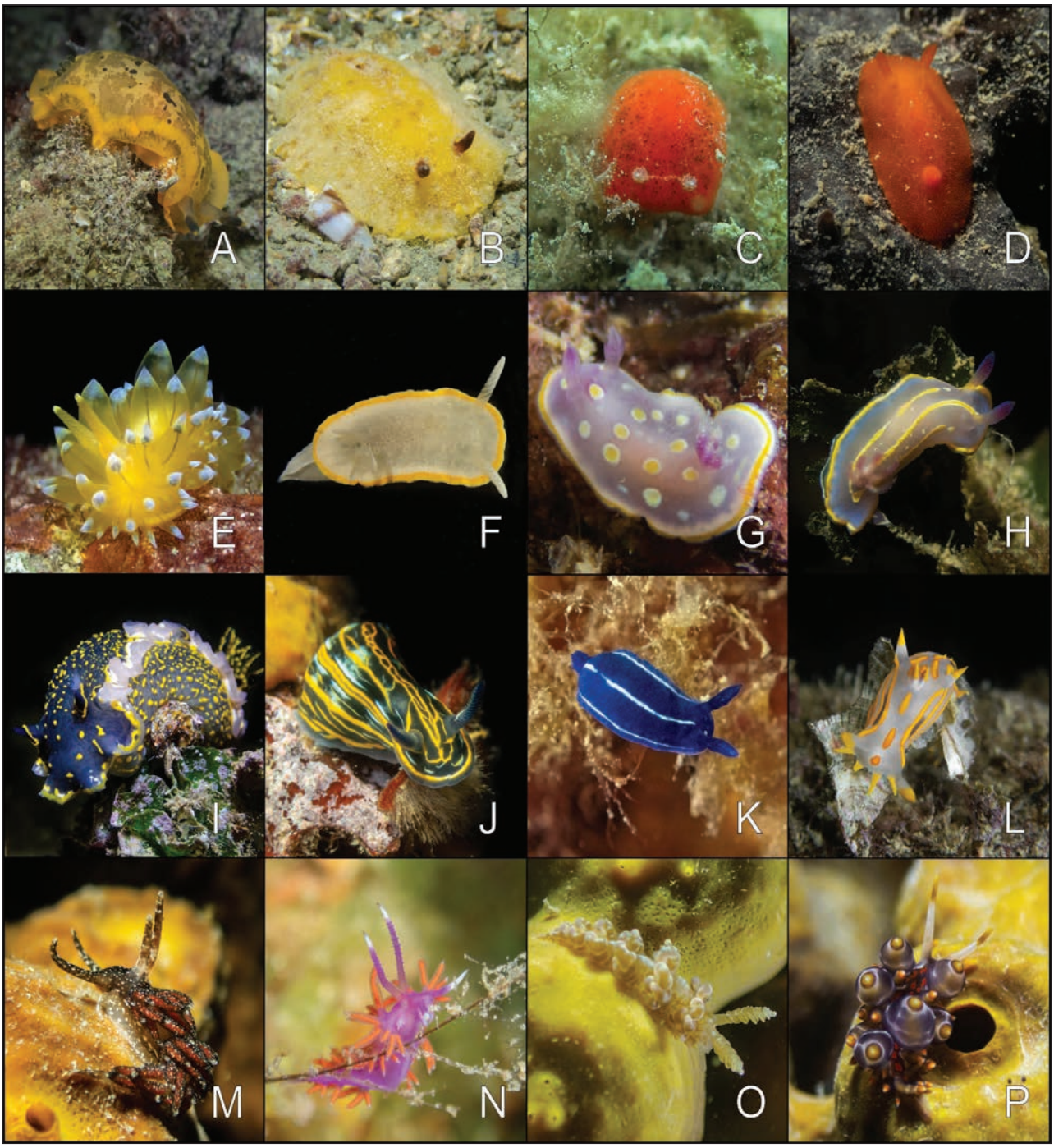

Fig. 4: Heterobranch species recorded in the study area. ***A*** *– Dendrodoris limbata,* ***B*** *– Doris cf. pseudoargus,* ***C*** *– Rostanga rubra,* ***D*** *– Discodoris rosi,* ***E*** *– Antiopella cristata,* ***F*** *– Diaphorodoris alba,* ***G*** *– Felimida luteorosa,* ***H*** *– Felimida krohni,* ***I*** *– Felimare picta,* ***J*** *– Felimare villafranca,* ***K*** *– Felimare orsinii,* ***L*** *– Polycera quadrilineata,* ***M*** *– Facelina fusca,* ***N*** *– Paraflabellina ischitana,* ***O*** *– Spurilla neapolitana, and* ***P*** *– Eubranchus viriola* ***(Photos: Tea Knapič: A, B, D, E, G, H, I, J, K, L, M, N, O, P; Tihomir Makovec: C; Domen Trkov: F).***

Sl. 4: Favna polžev zaškrgarjev na obravnavanem območju. ***A*** *– Dendrodoris limbata,* ***B*** *– Doris cf. pseudoargus,* ***C*** *– Rostanga rubra,* ***D*** *– Discodoris rosi,* ***E*** *– Antiopella cristata,* ***F*** *– Diaphorodoris alba,* ***G*** *– Felimida luteorosa,* ***H*** *– Felimida krohni,* ***I*** *– Felimare picta,* ***J*** *– Felimare villafranca,* ***K*** *– Felimare orsinii,* ***L*** *– Polycera quadrilineata,* ***M*** *– Facelina fusca,* ***N*** *– Paraflabellina ischitana,* ***O*** *– Spurilla neapolitana, in* ***P*** *– Eubranchus viriola* ***(Fotografije: Tea Knapič: A, B, D, E, G, H, I, J, K, L, M, N, O, P; Tihomir Makovec: C; Domen Trkov: F).***

lack of a comprehensive review of the genus *Eubranchus*, we prefer to use the Latin name *Eubranchus viriola* (see Toso *et al.*, 2024).

Checklist of species

Counting the species observed in the studied area, alongside those reported in previous publications (Lipej *et al*., 2008, 2012, 2014, 2018) (Tab. 2), the total number of heterobranch species registered in the Fiesa area to date is 51. The discovery of 30 species over three months and a comprehensive checklist of 51 documented species indicate Fiesa to be a species-rich area. If we compare the number of heterobranch species recorded for Fiesa with the previously reported survey of species in Slovenian waters (141 species) compiled by Lipej *et al*. (2018), it accounts for over 1/3 of all species ever reported in these waters. However, since many common sea slug species present in neighbouring areas were not confirmed in this study, it may be speculated that the 51 species recorded so far are an underestimation of the true number of heterobranch species in the study area.

Such heterobranch diversity can be attributed to the high spatial heterogeneity and the variety of habitat types present in the studied area. It is well known that the abundance and distribution patterns of benthic biodiversity are influenced by spatial heterogeneity (Zuschin *et al.,* 2001; Bouchet *et al.,* 2002; Romoth *et al.*, 2023).

Many heterobranch species are characterized by vivid coloration, but as typically small animals that only occur in low densities and in specific habitats (Zenetos *et al*., 2016), they may not be easily spotted. Some cryptic species, such as those from the family Onchidorididae. were often overlooked in the past due to their excellent camouflage. An onchidorid species, *Atalodoris pictoni* (Furfaro & Trainito, 2017) (Fig. 5), which feeds on the encrusting bryozoan *Reptadeonella violacea* (Johnston, 1847), was previously reported in the area by Fortič *et al*. (2021). A new species, *Atalodoris camassae* (Furfaro & Trainito, 2022) (Fig. 6), was recently described from the studied area by Furfaro *et al*. (2023). It was observed feeding on the cheilostomatid bryozoan *Calpensia nobilis* (Esper, 1796).

Tab. 2: Heterobranch species previously recorded in the studied area (with date of first record) according to published papers (pp) and social media (sm).
Tab. 2: Vrste polžev zaškrgarjev, predhodno zabeležene na obravnavanem proučevanem območju (z datumom prvega zapisa o pojavljanju) glede na objavljene članke (pp) in družbena omrežja (sm).

	date/ species	source	date of first record	type
1	*Armina rubida*	Knapič *et al*. (2024)	10.10.2023	pp
2	*Atalodoris camassae*	Furfaro *et al*. (2023)	March 2021	pp
3	*Atalodoris pictoni*	Fortič *et al*. (2021)	20.07.2021	pp
4	*Baptodoris cinnabarina*	Frković (2022)	13.02.2021	sm
5	*Berghia coerulescens*	Knapič (2023)	20.08.2023	sm
6	*Berthellina edwardsi*	Novak Srke (2023)	1.01.2023	sm
7	*Bosellia mimetica*	Lipej *et al*. (2018)	24.09.2014	pp
8	*Bursatella leachi*	Lipej *et al*. (2018)	19.10.2014	pp
9	*Diaphorodoris alba*	Trkov & Lipej (2022)	12.07.2021	pp
10	*Doris ocelligera*	Lipej *et al*. (2018)	12.01.2017	pp
11	*Ercolanea coerulea*	Lipej *et al*. (2018)	24.09.2014	pp
12	*Ercolanea viridis*	Lipej *et al*. (2018)	24.09.2014	pp
13	*Favorinus branchialis*	Lipej *et al*. (2018)	24.09.2014	pp
14	*Felimare orsinii*	Lipej *et al*. (2018)	10.06.2011	pp
15	*Jorunna tomentosa*	Lipej *et al*. (2018)	27.03.2011	pp
16	*Placida cremoniana*	Lipej *et al*. (2018)	11.09.2016	pp
17	*Placida dendritica*	Lipej *et al*. (2018)	24.09.2014	pp
18	*Rostanga rubra*	Lipej *et al*. (2018)	27.03.2011	pp
19	*Tayuva iliacina*	Lipej *et al*. (2018)	12.01.2017	pp
20	*Tethys fimbria*	Godnič (2023)	3.06.2023	sm
21	*Trinchesia genovae*	Lipej *et al*. (2018)	24.09.2014	pp

Fig. 5: Atalodoris pictoni, a recently discovered, lesser-known nudibranch from the area of Fiesa (Photo: M. Fantin).
Sl. 5: Atalodoris pictoni, nedavno odkrita, manj znana vrsta gološkrgarja iz okolice Fiese (Foto: M. Fantin).

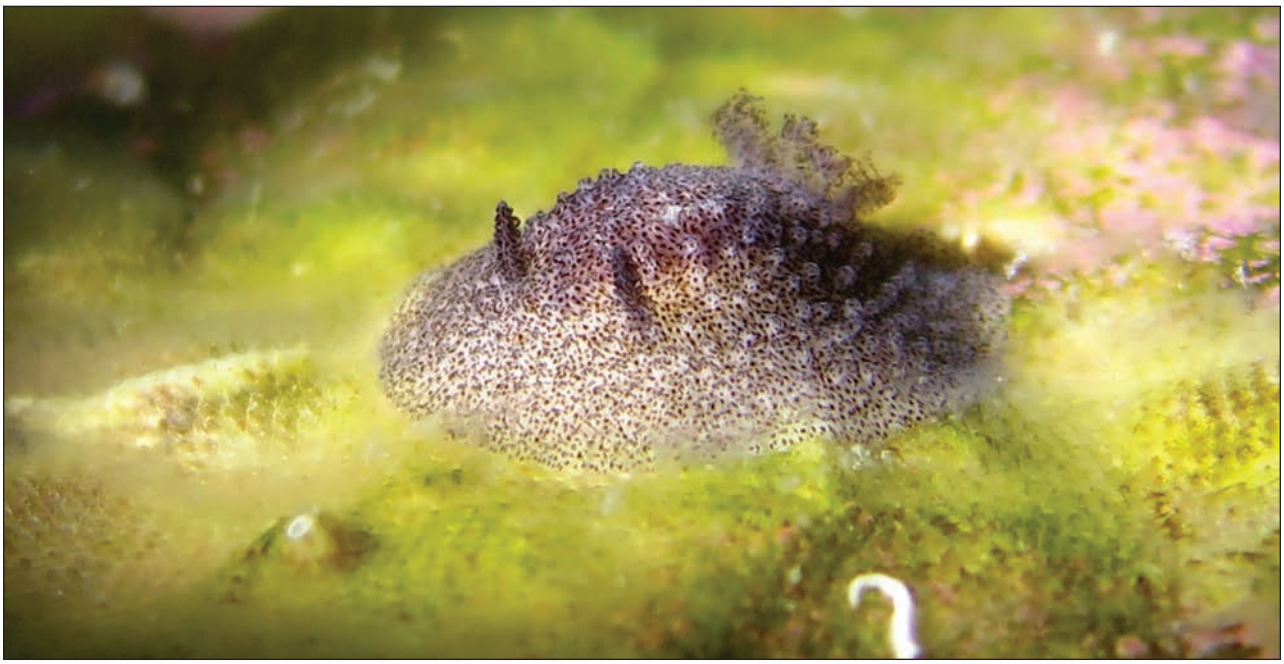

Fig. 6: Atalodoris camassae, a recently discovered heterobranch species, described as new species with the locus typicus in Fiesa (Photo: I. Frkovič).
Sl. 6: Atalodoris camassae, nedavno odkrita vrsta polža zaškrgarja, opisana kot nova vrsta z locus typicus v Fiesi. (Foto: I. Frkovič).

Fig. 7: Armina rubida, an alien heterobranch species, recently discovered in the studied area (Photo: T. Knapič).
Sl. 7: Na proučevanem območju nedavno odkrita tujerodna vrsta polža zaškrgarja Armina rubida (Foto: T. Knapič).

Among the 51 species of heterobranchs recorded in the Fiesa area, two are non-indigenous: *Bursatella leachi* Blainville, 1817 and *Armina rubida* (A. Gould, 1852). The former has regularly occurred in Slovenian waters since 2007 (see Lipej *et al.*, 2018), while *A. rubida* (Fig. 7) was only recently discovered on the sedimentary bottom in Fiesa (Knapič *et al.*, 2024). It was found on a bare muddy bottom during a night dive. However, after being spotted and illuminated by a torch, it immediately began burrowing into the mud. This finding was the second record of the species in the Adriatic Sea (Knapič *et al.*, 2024) and the first sighting in the northern Adriatic. We also found a specimen that matched the characteristics of the former *Aplysia parvula* Mörch, 1863 (Fig. 3J); however, based on new discoveries, Mediterranean specimens previously identified as this species are now considered to be small specimens of *Aplysia punctata* (Cuvier, 1803) (*sensu* Golestani *et al.*, 2019).

The list of species inhabiting the Fiesa area is far from complete. As heterobranchs are known to be stenophagous, specialising in specific diets of algae, cnidarians, sponges, and bryozoans (McDonald & Nybakken, 1997; Furfaro *et al.*, 2017), surveys targeting specific prey species may help record some previously overlooked heterobranch in the future. While most data on heterobranchs originate from summer sampling (Zenetos *et al.*, 2016), our study, in contrast, highlights heterobranch fauna during the coldest period of the year.

Comparison with adjacent areas

When comparing the data on heterobranch species in Fiesa with those from other areas in the Slovenian part of the Adriatic Sea where lists of marine fauna and flora have been compiled (Tab. 3), Fiesa emerges as a heterobranch hotspot, with the highest number of

Tab. 3: Updated list of Heterobranchia species identified in Fiesa compared to heterobranch fauna from other areas of the Slovenian part of the Adriatic Sea.
Tab. 3: Posodobljen seznam vrst polžev zaškrgarjev, ugotovljenih v Fiesi, v primerjavi s favno zaškrgarjev iz drugih območij slovenskega dela Jadranskega morja.

		FIESA	Nature Monument DEBELI RTIČ	Stjuža lagoon STRUNJAN	Port of Koper, KOPER	waters off the old city, PIRAN
"n"	heterobranch species	THIS WORK	Lipej *et al.* (2016)	Lipej *et al.* (2019)	Lipej *et al.* (2020)	Lipej *et al.* (2022)
1	*Acteon tornatilis*		X		X	
2	*Aegires pallensis*					X
3	*Akera bullata*		X	X	X	
4	*Amphorina linensis*	X				
5	*Antiopella cristata*	X	X			X
6	*Aplysia punctata*	X		X		
7	*Atalodoris camassae*	X				
8	*Atalodoris pictoni*	X				
9	*Baptodoris cinnabarina*	X				X
10	*Berghia coerulescens*	X	X			X
11	*Berghia verrucicornis*			X		
12	*Berthella ocellata*	X				X
13	*Berthella plumula*	X				
14	*Berthellina edwardsi*	X				
15	*Bosellia mimetica*	X				X
16	*Bursatella leachi*	X		X	X	X
17	*Calliopaea bellula*					X
18	*Calmella cavolini*			X		
19	*Capellinia doriae*			X		
20	*Catriona gymnota*			X		
21	*Cratena peregrina*	X	X	X	X	X
22	*Cylichna cylindracea*			X	X	
23	*Dendrodoris grandiflora*	X	X			
24	*Dendrodoris limbata*	X		X		X
25	*Armina rubida*	X				
26	*Diaphorodoris alba*	X				

27	*Discodoris rosi*	X				
28	*Doris bertholotti*					X
29	*Doris ocelligera*	X				X
30	*Doris pseudoargus*	X				X
31	*Doris sp.*	X				
32	*Doto acuta*			X		
33	*Doto coronata*			X	X	
34	*Doto cervicenigra*			X	X	X
35	*Doto rosea*			X	X	
36	*Edmundsella pedata*					X
37	*Elysia gordanae*	X				X
38	*Elysia timida*	X	X			X
39	*Elysia viridis*	X	X	X		X
40	*Ercolanea coerulea*	X				
41	*Ercolanea viridis*	X		X		
42	*Eubranchus viriola*	X		X		
434	*Eubranchus exiguus*			X		X
44	*Facelina dubia*			X		
45	*Facelina fusca*	X	X			X
46	*Favorinus branchialis*	X		X		X
47	*Felimare orsinii*	X				
48	*Felimare picta*	X				
49	*Felimare villafranca*	X	X			X
50	*Felimida krohni*	X	X			X
51	*Felimida purpurea*		X			
52	*Felimida luteorosea*	X	X			
53	*Geitodoris planata*	X				
54	*Haminea fusari*					X
55	*Haminea hydatis*		X			
56	*Haminea navicula*		X			
57	*Haloa japonica*			X		
58	*Hancockia uncinata*			X		

59	*Idaliadoris depressa*	X				
60	*Idaliadoris neapolitana*				X	
61	*Jorunna tomentosa*	X		X		
62	*Paraflabellina ischitana*	X	X			X
63	*Petalifera petalifera*		X			
64	*Philine quadripartita*		X			
65	*Philinopsis depicta*	X	X			
66	*Piseinotecus sphaerifera*				X	
67	*Placida cremoniana*	X				
68	*Placida dendritica*	X				
69	*Pleurehdera stellata*		X	X	X	X
70	*Polycera quadrilineata*	X		X		X
71	*Polycera hedgpethi*			X		X
72	*Polycerella emmertoni*			X		X
73	*Retusa mammillata*		X			
74	*Retusa truncatula*					
75	*Rostanga rubra*	X				
76	*Runcina adriatica*					X
77	*Runcina ferruginea*					X
78	*Spurilla neapolitana*	X	X	X		
79	*Stiliger fuscovittatus*			X		
80	*Tayuva iliacina*	X				X
81	*Tergipes tergipes*			X		
82	*Tethys fimbria*	X				
83	*Thuridilla hopei*	X	X			X
84	*Trapania lineata*	X				
85	*Trapania maculata*	X	X			
86	*Trinchesia genovae*	X		X		X
87	*Tylodina perversa*	X				
88	*Weinkauffia turgidula*					X
	Number of species	51	24	31	11	34

observed species and 19 heterobranch species recorded exclusively in this area. The current checklist of heterobranchs from Fiesa could serve as a baseline for future monitoring of this area, which is currently subject to intense recreational diving tourism. Future surveys, especially during other seasons, are necessary to gather more information about the presence and seasonality of marine heterobranch fauna.

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VPOGLED V FAVNO POLŽEV ZAŠKRGARJEV FIESE (SLOVENIJA, SEVERNI JADRAN)

Tea KNAPIČ
Slovenian Natural History Museum, Prešernova cesta 20, 1000 Ljubljana, Slovenia

Irena FRKOVIČ
Jenkova ulica 1, 6000 Koper, Slovenia

Borut MAVRIČ
Marine Biology Station Piran, National Institute of Biology, Piran, Fornače 41, 6330 Piran, Slovenia

Lovrenc LIPEJ
Marine Biology Station Piran, National Institute of Biology, Piran, Fornače 41, 6330 Piran, Slovenia
FAMNIT, University of Primorska, 6000 Koper, Slovenia

POVZETEK

Avtorji so raziskovali favno morskih polžev zaškrgarjev (Heterobranchia, Gastropoda) v Fiesi, turistični destinaciji in enem najbolj priljubljenih potapljaških krajev v Tržaškem zalivu (severni Jadran). Primerke zaškrgarjev so popisovali med novembrom 2021 in januarjem 2022. Popisali in določili so skupno 30 vrst iz 6 višjih taksonov (Cephalaspidea 1, Aplysiida 1, Umbraculida 1, Sacoglossa 3, Pleurobranchida 2, Nudibranchia 22). Vključno s predhodno objavljenimi in zabeleženimi podatki se je skupno število trenutno znanih vrst na območju raziskave povečalo na 51. Smiselno je pričakovati, da bodo prihodnje raziskave, ki bodo vključevale dodatne metode vzorčenja in bodo izvedene v drugih letnih časih, še povečale število zabeleženih morskih vrst polžev zaškrgarjev, ki naseljujejo to območje.

Ključne besede: morski polži zaškrgarji, seznam vrst, potapljanje z avtonomno potapljaško opremo, Fiesa, rekreativni potapljači

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