

## Short Communication

### Checklist of gastropod molluscs in west coast of Algeria

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**Abstract:** Samplings were performed during 2015-2019 from the rocky intertidal zone of the west coast of Algeria to determine its gastropods' inventory. The regular survey from 18 stations revealed the presence of 28 species belonging to 12 families. The patellids was most diverse family with 17.85% of the total sampled gastropods, followed by Buccinidae (14.28%), Trochidae (14.28%), Muricidae (10.71%), Mitidae (7.14%), Certhiidae (7.14%), Vermetidae (7.14%), Aplysiidae (7.14%), Cymatiidae (3.57%), Haliotidae (3.57%), Calliostomatidae (3.57%) and turbinids (3.57%). In addition, the Crustaceans living under these mollusk shells were reported.

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#### Introduction

Aquatic malacological fauna is not well-known in the west coast of Algeria. Most of the previous inventories of the benthic fauna of continental shelf in the west coast of Algeria have not been updated (Dautzenberg, 1895; Pallary, 1900; Llabador, 1935; Kerfouf, 2007). The absence of synthesis work led us to update the list of gastropod mollusks in the substrate of the west coast of Algeria by sampling these regions.

#### Materials and Methods

Regular explorations were conducted at 18 stations in a natural or artificial hard substrate of the west coast of Algeria (Table 1). Visible species were searched with the naked eye in all the preferred environments and the specimens were collected by hand (Lewis and Magnuson, 2000; Micharlik-Kucharz et al., 2000; Falkner et al., 2001; Bonham et al., 2002; Darby et al., 2002; Labaune and Magnin, 2002; Cameron and Pokryszko, 2004; Kisset et al., 2004; Pokryszko et al., 2006; Boschi and Baur, 2007a, b). The sampling performed at the infra littoral and midlittoral levels, in a depth not exceeding 3 m. In each station, the surveyed surface was between 1 and 6 m<sup>2</sup>. An additional list of the mollusk shell hosts was provided.

The 18 surveyed stations were chosen randomly and depending on the site accessibility. Each station has its own characteristics, by the nature of the substrate, hydrogen supplies and terrigenous and its biodiversity, and subject to anthropogenic pressures, that impacted the malacological diversity of each station.

#### Results and Discussions

A total of 28 species of gastropod mollusks belonging to 12 families were collected.

#### Checklist:

**Family Patellids:** 17.85% with 5 species (17.85%)

- *Patella nigra* (Da Costa, 1791)
- *Patella ferruginea* (Gmelin, 1791)
- *Patella rustica* (Linnaeus, 1758)
- *Patella ulyssiponensis* (Gmelin, 1791)
- *Patella caerulea* (Linnaeus, 1758)

**Family Buccinidae:** 4 species (14.28%)

- *Buccinulum corneum* (Linnaeus, 1758)
- *Pisania striata* (Gmelin, 1791)
- *Pisania maculosa* (Lamarck, 1819)
- *Cantharus dorbignyi* (Payraudeau 1826)

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Table 1. Sampling stations in the west coast of Algeria.

Station	Position	Town
1	35° 18'04.58'' N 1°24'09.29'' O	Béni Saf - Plage du puit
2	35° 18'17.01'' N 1°23'36.69'' O	Béni Saf - Plage du puit
3	35° 18'24.73'' N 1°22'46.96'' O	Béni Saf - Plage de Sidi Boucif.
4	35° 21'21.44'' N 1°17'13.59'' O	Plage de Sidi Djelloul
5	35° 17'58.00'' N 1°28'08.16'' O	Plage de Rechgoun
6	35° 17'50.49'' N 1°28'26.15'' O	Plage de Rechgoun
7	35° 19'06.43'' N 1°28'36.78'' O	Ile de Rechgoune
8	35° 26'10.45'' N 1°14'20.98'' O	Terga plage
9	35° 33'21.56'' N 1°11'40.96'' O	Sbiaat plage
10	35° 33'12.25'' N 1°11'51.40'' O	Presque-ile de Sbiaat
11	35° 44'31.88'' N 0°50'12.54'' O	Bousfer plage. Oran
12	35° 44'24.15'' N 0°50'17.07'' O	Bousfer plage. Oran
13	35° 44'29.95'' N 0°50'13.68'' O	Bousfer plage. Oran
14	35° 44'34.88'' N 0°45'16.39'' O	Ain El turk (digue artificielle). Oran
15	35° 42'29.20'' N 0°54'21.13'' O	Les Andalouses plage
16	35° 42'39.44'' N 0°54'28.34'' O	Les Andalouses plage
17	35° 34'23.15'' N 1°09'32.35'' O	Bouzedjar plage. Digue artificielle.
18	35° 34'25.52'' N 1°09'24.87'' O	Bouzedjar plage.

**Family Trochids:** 4 species (14.28%)

- *Monodonta articulata* (Lamarck, 1822)
- *Monodonta turbinata* (Born, 1780)
- *Gibbularari lineata* (Michaud, 1829)
- *Gibbula richardi* (Payraudeau 1826)

**Family Muricidae:** 3 species (10.71%)

- *Stramonita haemastoma* (Linnaeus, 1767)
- *Muricopsis cristata* (Brocchi, 1814)
- *Phyllonotus trunculus* (Linnaeus, 1758)

**Family Mitidae:** 2 species (7.14%)

- *Pusia ebenus* (Lamarck, 1811)
- *Mitra cornicula* (Linnaeus, 1758)

**Family Certhiids:** 2 species (7.14%)

- *Certhium vulgatum* (Bruguière, 1792)
- *Cave certhium* (Risso, 1826)

**Family Vermetidae:** 2 species (7.14%)

- *Vermetus triquetus* (Bivona-Bernardi, 1832)
- *Dendropoma petraeum* (Monterosato, 1884)

**Family Aplysiidae:** 2 species (7.14%)

- *Aplysia punctata* (Cuvier, 1803)
- *Aplysia fasciata* (Poiret, 1789)

**Family Cymatiidae:** 1 species (3.57%)

- *Cymatium cutaceum* (Linnaeus, 1767)

**Family Haliotids:** 1 species (3.57%)

- *Haliotis tuberculata lamellosa* (Lamarck, 1822)

**Family Calliostomatidae:** 1 species (3.57%)

- *Calliostoma zizyphinum* (Linnaeus, 1758)

**Family Turbinidae:** 1 species (3.57%)

- *Astraea rugosa* (Linnaeus, 1758)

The hosted decapod of collected shells of the gastropod were as following:

- *Mitra zonata* (Marryatt, 1817)
- *Corraliophylameyondorffi* (Calcara, 1845)
- *Cerithium alucastrum* (Brocchi, 1814)
- *Semcassis saburon* (Bruguière, 1791)
- *Phalium granulatum* (Von Born, 1778)
- *Cassidaria echinophora* (Linnaeus, 1758).

The presence of a large number of gastropods in certain stations coincides with the absence of socio-economic structures and low urbanization and a minimum of trampling. We noticed that the strong diversity of gastropods is accompanied by a remarkable floristic diversity, while the diversity of

gastropods was minimum in anthropized areas, despite the important density of certain species which, by their number of individuals, created a sort of competition for other species that find some difficulties to settle in these disturbed environments. Climate change has an influence on the spatial distribution of temperature-sensitive species, and thus is likely to impact the marine environment, particularly the intertidal habitats (Helmuth et al., 2010). The induced thermal stresses result frequently in detrimental physiological and behavioral responses, and in extreme cases, lead to mortality (Verdelhos et al., 2015).

As conclusion, a total of 28 species of gastropod molluscs were identified. Since the substrate of the harvested areas was rocky, certain gastropods lead a sedentary life or with very little movement. The identified mollusc shells, which shelter crustaceans, gives us an overview of the gastropods existing in the deeper areas; these shells were rejected by the waves during winter storms, to end up in the surveyed foreshore. The richest stations in gastropod molluscs are those where the algal carpet is more remarkable. These algae serve as food for grazers and refuge for others i.e. in sites undergoing strong anthropogenic activities (pollution, discharge of waste water, etc.), the diversity of gastropods is clearly low.

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