

## A1.3x Sheltered Pontic mediolittoral rock

### Summary

The habitat is present in the Black Sea on soft sheltered mediolittoral substrate. It is not present in the Sea of Marmara. The main pressures effecting this habitat are eutrophication, coastal development, chemical pollution and increased water temperatures due to climate change. The habitat engineering species *Pholas dactylus* is protected under the Bern and Barcelona Conventions (Appendix II). It is also listed in regional and national Red Data Lists. The habitat could be protected in the future by designating additional MPAs, improving water quality and installing artificial reefs.

### Synthesis

Detailed information on the abundance and extent of this habitat is lacking this species is rare. Information on the quantity and quality of this habitat including historical or recent trends is unknown. This habitat has therefore been assessed as Data Deficient.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Data Deficient	-	Data Deficient	-

### Sub-habitat types that may require further examination

None

### Habitat Type

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#### Code and name

A1.3x Sheltered Pontic mediolittoral rock

No characteristic photograph of this habitat currently available.

#### Habitat description

The habitat is located at 0-0.5 m deep on soft rocks (such as chalk, marl and hard clay) into which habitat forming species can burrow. Empty burrows are often utilized by other invertebrate and fish species. This habitat occurs in sheltered situations.

Indicators of quality:

There are no commonly agreed indicators of quality for this habitat, although particular parameters may have been set in certain situations e.g. protected features within Natura 2000 sites, where reference values have been determined and applied on a location-specific basis.

Characteristic species:

Piddock (*Pholas dactylus*) beds

#### Classification

This habitat may be equivalent to, or broader than, or narrower than the habitats or ecosystems in the following typologies.

EUNIS (v1405):

Level 4 . A sub-habitat of 'Pontic littoral rock' (A1.3)

Annex 1:

1160 Large shallow inlets and bays

1170 Reefs

MAES:

Marine - Marine inlets and transitional waters

Marine - Marine coastal

MSFD:

Littoral rock and biogenic reef

EUSeaMap:

Not mapped

IUCN:

No relationship

**Does the habitat type present an outstanding example of typical characteristics of one or more biogeographic regions?**

Unknown

Justification

There is insufficient knowledge and information on this habitat to state whether it is an outstanding example of this biogeographic region.

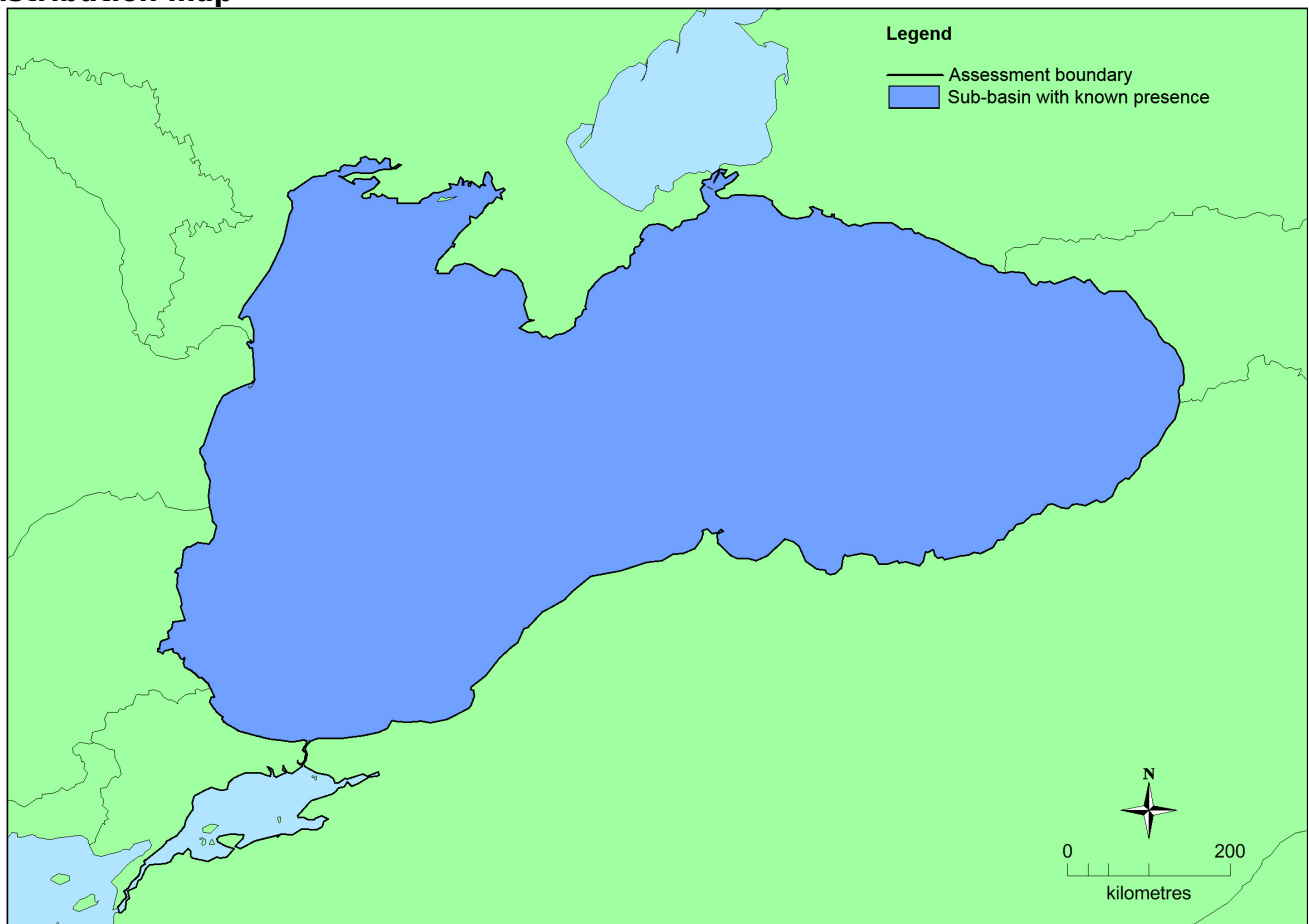
**Geographic occurrence and trends**

Region	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Black Sea</i>	Black Sea: Present	Unknown Km <sup>2</sup>	Unknown	Unknown

**Extent of Occurrence, Area of Occupancy and habitat area**

	Extent of Occurrence (EOO)	Area of Occupancy (AOO)	Current estimated Total Area	Comment
<i>EU 28</i>	Unknown Km <sup>2</sup>	Unknown	Unknown Km <sup>2</sup>	The habitat is known to occur in the Black Sea but there is insufficient data to accurately calculate EOO and AOO.
<i>EU 28+</i>	Unknown Km <sup>2</sup>	Unknown	Unknown Km <sup>2</sup>	The habitat is known to occur in the Black Sea but there is insufficient data to accurately calculate EOO and AOO.

## Distribution map



There is insufficient data to produce a map of the distribution of this habitat.

### How much of the current distribution of the habitat type lies within the EU 28?

It is unknown how much of this habitat is hosted by the EU28 in the Black Sea.

### Trends in quantity

There is insufficient data to accurately assess changes in quantity of the habitat

- Average current trend in quantity (extent)

EU 28: Unknown

EU 28+: Unknown

- Does the habitat type have a small natural range following regression?

Unknown

*Justification*

The habitat is known to occur in the Black Sea but there is insufficient data to accurately calculate EOO and AOO. There is insufficient data to accurately assess whether the habitat has undergone a significant decline (>25% of extent) in the last 50 years.

- Does the habitat have a small natural range by reason of its intrinsically restricted area?

Unknown

*Justification*

There is insufficient data and knowledge on this habitat to state whether it has a small natural range by reason of an intrinsically restricted area.

### Trends in quality

There is insufficient data to accurately assess changes in quality of the habitat

- Average current trend in quality

EU 28: Unknown

EU 28+: Unknown

## **Pressures and threats**

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Eutrophication as a result of nutrient enrichment (N, P and organic matter) is the most significant historic pressure on the habitat. *Pholas dactylus* and *Barnea candida* cannot survive in anoxic or hypoxic conditions caused by eutrophication. Since the 1990s this pressure has reduced due to tighter controls on pollution in the catchment of the Danube and other rivers which enter the north-west Black Sea. Whilst this pressure is now reduced it is still a continuing threat in the current and future periods. This is especially true for non EU countries surrounding the Black Sea which are not bound by the agreements such as the Water Framework Directive (WFD).

Coastal developments including the construction of marinas and slipways, sediment extraction, the widening and dredging of channels, creation of artificial beaches, road developments and sea defences. These activities may alter the hydrological regime which will in turn affect the character and viability of the habitat.

Chemical pollution. This is a threat of current and future importance which at its most severe can result in species can lead to mortality. High mortality rates can lead to a reduction in extent. Lower mortality rates will result in a reduction in habitat quality. Chemical pollution may also affect the size and growth rate of some of the associated fauna.

Increased water temperatures from climate change may affect the habitat in the future. *Pholas dactylus* require soft rocks in to which they can burrow. In warm waters softs rocks (such as clay) can harden preventing the key species from forming burrows.

### **List of pressures and threats**

#### **Urbanisation, residential and commercial development**

Other urbanisation, industrial and similar activities

#### **Pollution**

Nutrient enrichment (N, P, organic matter)

Input of contaminants (synthetic substances, non-synthetic substances, radionuclides) - diffuse sources, point sources, acute events

#### **Climate change**

Changes in abiotic conditions

Temperature changes (e.g. rise of temperature & extremes)

## **Conservation and management**

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*Pholas dactylus* is protected species under the Bern Convention. It is also listed as threatened in the Red Data Book for Ukraine. In some localities (e.g. Crimea) the habitat is protected by protected areas. Controls on water quality are now present in the western Black Sea (e.g. WFD).

Adopting the following conservation and management actions will benefit the habitat in the future: such as the designation of additional protected areas, improvement of water quality controls for non EU states, installation of artificial reefs may provide habitat situations for recolonization.

## List of conservation and management needs

### Measures related to marine habitats

Other marine-related measures  
Restoring marine habitats

### Measures related to spatial planning

Establish protected areas/sites

## Conservation status

Annex 1:

1160: MBLS U1

1170: MBLS U1

## When severely damaged, does the habitat retain the capacity to recover its typical character and functionality?

There is insufficient data and knowledge of this habitat to assess its capacity to recover

### Effort required

10 years
Unknown

## Red List Assessment

### Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	unknown %	unknown %	unknown %	unknown %
EU 28+	unknown %	unknown %	unknown %	unknown %

There is insufficient data on changes in quantity of this habitat to undertake an assessment using criterion A.

### Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	EOO	a	b	c	AOO	a	b	c	
EU 28	unknown Km <sup>2</sup>	Unknown	Unknown	unknown	unknown	Unknown	Unknown	unknown	unknown
EU 28+	unknown Km <sup>2</sup>	Unknown	Unknown	unknown	unknown	Unknown	Unknown	unknown	unknown

The precise extent of the habitat is unknown. Therefore there is insufficient data to produce EOO and AOO figures.

### Criterion C and D: Reduction in abiotic and/or biotic quality

Criteria C/D	C/D1		C/D2		C/D3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Criteria C/D	C/D1		C/D2		C/D3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28+	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Criterion C	C1		C2		C3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %
EU 28+	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Criterion D	D1		D2		D3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown%	unknown %	unknown%	unknown %	unknown%
EU 28+	unknown %	unknown%	unknown %	unknown%	unknown %	unknown%

Experts consider there to be insufficient data to conduct an assessment using criteria C/D.

### Criterion E: Quantitative analysis to evaluate risk of habitat collapse

Criterion E	Probability of collapse
EU 28	unknown
EU 28+	unknown

There is no quantitative analysis available to estimate the probability of collapse of this habitat type.

### Overall assessment "Balance sheet" for EU 28 and EU 28+

	A1	A2a	A2b	A3	B1	B2	B3	C/D1	C/D2	C/D3	C1	C2	C3	D1	D2	D3	E
EU28	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Data Deficient	-	Data Deficient	-

### Confidence in the assessment

Low (mainly based on uncertain or indirect information, inferred and suspected data values, and/or limited expert knowledge)

### Assessors

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### Reviewers

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## References

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