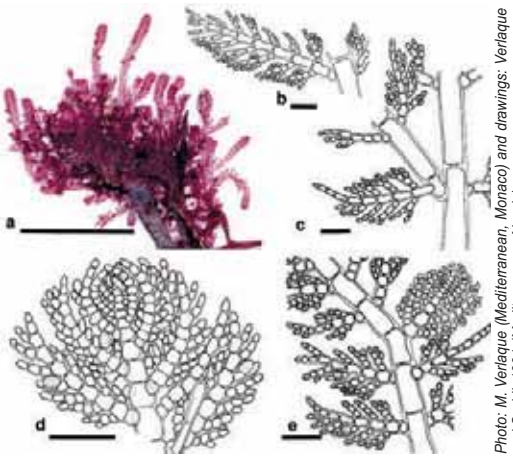
Antithamnion amphigeneum A.J.K. Millar

Relevant synonyms
Antithamnion algeriensis M. Verlaque & Seridi
Antithamnion algeriense M. Verlaque & Seridi

Misidentification
Antithamnion nipponicum Yamada



a. Dried specimen. b. Whorl-branch. c. Secondary lateral axis. d. Apex. e. Young primary lateral axis. Bars a = 5 mm; b-e = 50 µm.

Photo: M. Verlaque (Mediterranean, Monaco) and drawings: Verlaque and Seridi, 1991 (Mediterranean, Algeria).

Short description

Small (to 2 cm high), filamentous, uniseriate, pink-reddish; prostrate and erect indeterminate axes, ecorticate, 40-60 µm in diameter, bearing distichous opposite whorl-branches (pinnae) up to 380 µm long (550 µm in Australia); whorl-branches with an isodiametric basal cell, a rachis of 5-13 cells, up to 2 times as long as broad; first-order branchlets (pinnules) opposite distichous at the proximal portion of whorl-branches (pinnate branching) and abaxial near the distal portion (pectinate branching); simple, with abaxial or, in the most developed portions of plants, opposite second-order branchlets; primary indeterminate lateral axes produced from axial cells without any whorl-branches; secondary indeterminate lateral axes produced from basal cells of whorl-branches; terminal cells blunt; gland cells on the adaxial side of short branchlets, touching 2-3 cells; tetrasporangia mainly pedicellate, single, taking the place of branchlets, sometimes sessile adaxially on branchlets, ovoid, 65-95 x 43-70 µm; only male gametophytes and tetrasporophytes found in the Mediterranean.

Distinguishing characteristics

The branching of the whorl-branches, the gland-cells touching 2-3 branch cells, the primary indeterminate lateral axes single on axial cells (without any whorl-branch), and the terminal cells blunt are distinctive; confusion possible with:
- *A. nipponicum* Yamada & Inagaki: branching pattern less complex (second-order branchlets rare and only abaxial), indeterminate axes only produced from basal cells of whorl-branches, gland-cells touching 2 branch cells, and terminal cells acute.

Biology / Ecology / Habitat

Subtidal communities, especially shallow sciaphilic communities; annual (spring-summer).

Distribution

Worldwide: south-western Pacific, described from New South Wales (Millar, 1990); north-eastern Atlantic, northern Spain (introduced, first observation in 1995; Secilla *et al.*, 1997); Norway. **Mediterranean**: recorded first in 1989 from Algeria, Algiers (Verlaque and Seridi, 1991, as *Antithamnion algeriensis* nov. sp.); successively recorded in Spain, Alboran Island (Ribera Siguán and Soto Moreno, 1992, as *A. algeriense*), Andalusia (Invernón *et al.,* 2009); Morocco (González-García and Conde-Poyales, 1994); Italy, Liguria (Rindi *et al.*, 1996); Monaco (Di Martino and Giaccone, 1996, as *A. nipponicum*); France, Marseille (Klein *et al.,* 2005).

Mode of introduction

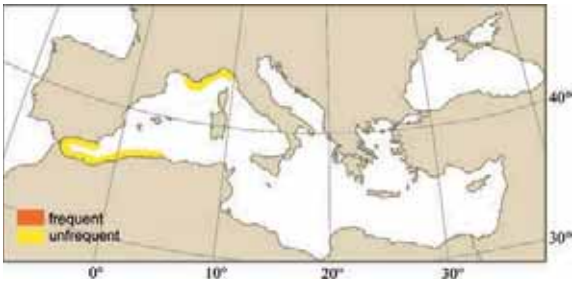
Shipping.

Establishment

Well established.

Importance to humans

None.



1st Mediterranean record
Algiers, Algeria, 1991 [1989].

Key references

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• Rindi F., Papi I. and Cinelli F., 1996. New records of Ceramiales (Rhodophyta) for the north-western Mediterranean. *Cryptogamie, Algologie,* 17: 223-238.

• Secilla A., Gorostiaga J.M., Díez I. and Santolaria A., 1997. *Antithamnion amphigeneum* (Ceramiales, Rhodophyta) from the European Alantic Coasts. *Botanica Marina,* 40: 329-332.

• Verlaque M. and Seridi H., 1991. *Antithamnion algeriensis* nov. sp. (Ceramiaceae, Rhodophyta) from Algeria (Mediterranean Sea). *Botanica Marina,* 34: 153-160.