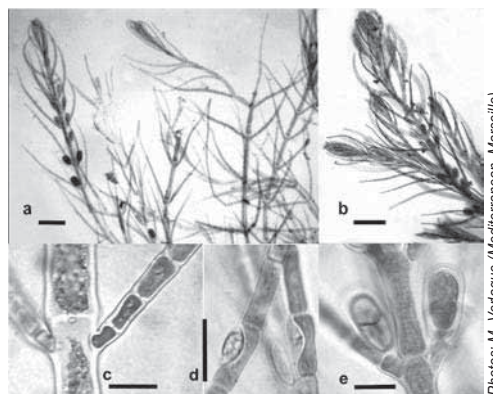


Antithamnionella ternifolia (J.D. Hooker & Harvey) Lyle

Relevant synonyms

Antithamnion sarniense (Lyle)
Feldmann-Mazoyer
Antithamnion sarniensis (Lyle)
Feldmann-Mazoyer
Antithamnionella sarniensis Lyle
Callithamnion ternifolia
J.D. Hooker & Harvey

a. Tetrasporophyte with tetrasporangia.
b. Upper portion. c. Basal part of whorl-branches, d. Gland cells. e. Tetrasporangia. Bars: a-b = 100 µm; c-e = 20 µm.



Photos: M. Verlaque (Mediterranean, Marseille).

Short description

Small (to 4 cm high), filamentous, uniseriate, red; prostrate and erect indeterminate axes, ecorticate; whorl-branches (pinnae), 2-4 per axial cell, subequal, up to 700 µm long and composed of up to 20 cells, straight or slightly curved, simple or poorly and unilaterally ramified; basal cell of whorl-branches (periaxial cell) shorter than the contiguous branch cell; terminal cells pointed; gland cells touching one branch cell, single per whorl-branch, on the 2nd, rarely on the 3rd or the 4th branch cell; tetrasporangia oblong, 40 µm x 23 µm, sessile usually on periaxial cells and contiguous branch cells.

Distinguishing characteristics

The sub-equal whorl-branches in whorls of 2-4, the whorl-branches straight or slightly curved, usually simple (rarely poorly and unilaterally ramified), with terminal cells pointed, the periaxial cells shorter than the contiguous branch cell and the gland cells single per whorl-branch are distinctive; confusion possible with the other species of *Antithamnionella*:

- *A. boergesenii* (Cormaci & G. Furnari) Athanasiadis: sub-equal whorl-branches in whorls of 4-5;
- *A. elegans* (Berthold) J.H. Price & D.M. John: sub-equal whorl-branches in whorls of 3 (rarely 2); whorl-branches ramified (rarely simple); terminal cells with rounded tip; gland cells single or in series of up to 3 per whorl-branch;
- *A. spirographidis* (Schiffner) E.M. Wollaston: un-equal or sub-equal whorl-branches in whorls of 1 - 2 (3); apices of axes sinusoidal; whorl-branches strictly distichous-opposite near the apices of axes, becoming decussate below, simple or sparsely and unilaterally ramified; periaxial cells as long as the contiguous branch cell;
- *A. sublittoralis* (Setchell & Gardner) Athanasiadis: sub-equal whorl-branches in whorls of 2; whorl-branches simple or distichously-alternately ramified; gland cells single or in series of up to 3 per whorl-branch.

Biology / Ecology / Habitat

Subtidal communities; present all year round.

Distribution

Molecular studies of Australian, British and Moroccan strains of *A. ternifolia* showed that they form a natural assemblage, with Australian and British plants being more closely related (Athanasiadis, 1996). According to Athanasiadis (1996), *A. ternifolia* would only be present in the southern Pacific, the southern and the north-eastern Atlantic. **Worldwide:** southern Pacific, described from the Cap Horn (Hooker and Harvey, 1845, as *Callithamnion ternifolia*), Chile, Australia, New Zealand, Tasmania; north-western Pacific, Japan; north-eastern Atlantic, Britain (introduced, first observation in 1906; Maggs and Hommersand, 1993), from Holland to Portugal; south-western Atlantic, Argentina; Indian Ocean, South Africa, Chagos Islands. **Mediterranean:** recorded first in 1926 from France, at Nice and Villefranche-sur-Mer (Ollivier, 1926); successively recorded at Toulon (Verlaque and Tiné, 1981), Cassis (Verlaque, 1994), Marseille (Klein and Verlaque, 2011); Monaco (Verlaque and Bernard, 1998).

Mode of introduction

Shipping.

Establishment

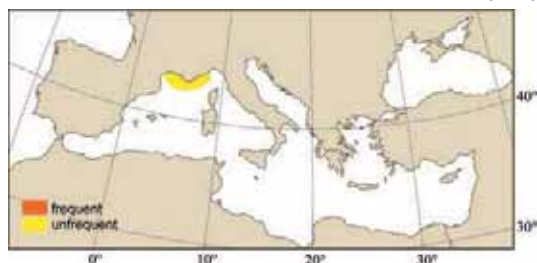
Well established.

Importance to humans

None.

1st Mediterranean record

Nice, Villefranche-sur-Mer, France, 1926 [1926].



Key references

- Athanasiadis A., 1996. Morphology and classification of the Ceramioideae (Rhodophyta) based on phylogenetic principles. *Opera Botanica*, 127: 1-221.
- Hooker J.D. and Harvey W.H., 1845. Algae antarcticae, being characters and descriptions of the hitherto unpublished species of algae, discovered in Lord Auckland's Group, Campbell's Island, Kerguelen's Land, Falkland Islands, Cape Horn and other southern circumpolar regions, during the voyage of H.M. discovery ships "Erebus" and "Terror". *London Journal of Botany*, 4: 249-276, 293-298.
- Maggs C.A. and Hommersand M.H., 1993. *Seaweeds of the British Isles. Volume 1. Rhodophyta. Part 3A. Ceramiales*. pp. xv + 444, 129 figs, map. London: HMSO.
- Ollivier G., 1926. Première note sur les algues floridées de Villefranche-sur-Mer et de Nice, qui renferment de l'iode et du brome à l'état libre. *Riviera Scientifique. Bulletin de l'Association des Naturalistes de Nice et des Alpes-Maritimes*, 3:49-53.
- Verlaque M., 1994. Inventaire des plantes marines introduites en Méditerranée: origines et répercussions sur l'environnement et les activités humaines. *Oceanologica Acta*, 17: 1-23.