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Rare plants from aquatic and semi-aquatic habitats of Lesvos island (east Aegean, Greece)

Abstract

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Floristic data are given on the occurrence in Lesvos (East Aegean islands, Greece) of *Baldellia ranunculoides* (L.) Parl., *Crassula vaillantii* (Willd.) Roth, *Elatine macropoda* Guss., *Gratiola officinalis* L., *Illecebrum verticillatum* L., *Iris pseudacorus* L., *Juncus tenageia* Ehrh., *Lythrum tribracteatum* Sprengel, *Myriophyllum alterniflorum* DC. and *Radiola linoides* Roth which are all new to this island. To the best of our knowledge four of them, i.e. *C. vaillantii*, *I. verticillatum*, *G. officinalis* and *L. tribracteatum* are not only new to Lesvos but also to all the Eastern Aegean islands and three other, i.e. *E. macropoda*, *J. tenageia* and *M. alterniflorum* are new to the Aegean Archipelago as a whole.

Introduction

The flora of aquatic and semi-aquatic habitats of Lesvos island was, until recently, inadequately known. The discovery in the last years, of several rare or undercollected plants, either in Lesvos or generally in Greece, has drawn our attention to such habitats and especially to those periodically inundated which are also known as vernal pools (Snogerup & Snogerup 1991). Geographical and ecological information regarding the investigated habitats are given in the legend of Figure 1. Some of our findings have already been presented in our previous communications (Bazos & Yannitsaros 1994a, 1994b). In the present paper, emphasis is given to species which are rare in the Aegean islands (i.e. *Gratiola officinalis* and *Iris pseudacorus*) or in Greece in general.

List of species

Baldellia ranunculoides (L.) Parl. (*Alismataceae*)

3, 16.5.1995, Bazos 2416 and 7.7.1995, Bazos 2648a. New to Lesvos. A rare plant with scattered distribution in Greece. As far as we know the only other locality in the Aegean islands is one on the island of Kos (Hansen 1980). It also occurs in Peloponnisos (Halácsy 1904, Rothmaler 1944, Raabe, pers. comm.), Makedonia (Zaganiaris 1940), Ipiros (Sarika-

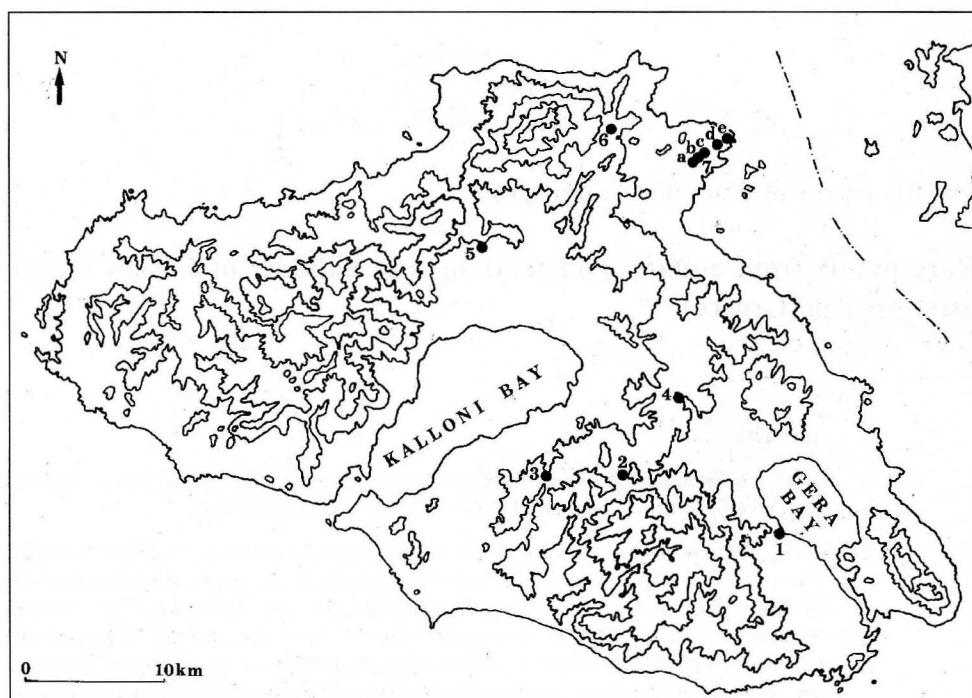


Fig. 1. Map of Lesbos with the investigated habitats. 1. Bay of Gera, c. 3 km WNW of Evriaki, $39^{\circ}05'N$ $26^{\circ}27'E$, shallow marsh near the seashore. 2. Megali Limni, $39^{\circ}06'N$ $26^{\circ}20'E$, draining ditch, alt. c. 300 m. 3. Mikri Limni, $39^{\circ}07'N$ $26^{\circ}16'E$, muddy edges or in the water of a shallow lake, alt. c. 200 m. 4. Approximately 4.5 km WNW of Lambou Myloi, $39^{\circ}10'N$ $26^{\circ}22'E$, vernal pool in *Pinus brutia* forest clearings, alt. c. 200 m. 5. Approximately 3 km N of Kalloni, $39^{\circ}16'N$ $26^{\circ}13'E$, vernal pool near the road to Petra, alt. c. 200 m. 6. Near Kapi, $39^{\circ}20'N$ $26^{\circ}19'E$, muddy edges of a pond, alt. c. 350 m. 7a. 6.3 km NNE of the crossroad to Palios (near Mandamados), $39^{\circ}19'N$ $26^{\circ}25'E$, vernal pool, alt. c. 20 m. 7b. 6.5 km NNE of the crossroad to Palios, $39^{\circ}19'N$ $26^{\circ}25'E$, dried vernal pool, alt. c. 20 m. 7c. 6.7 km NNE of the crossroad to Palios, $39^{\circ}19'N$ $26^{\circ}25'E$, dried vernal pool, alt. c. 20 m. 7d. 7.5 km NNE of the crossroad to Palios, $39^{\circ}20'N$ $26^{\circ}25'E$, dried vernal pool, alt. c. 20 m. 7e. 8 km NNE of the crossroad to Palios, $39^{\circ}20'N$ $26^{\circ}25'E$, vernal pool, alt. c. 20 m.

Hatzinikolaou & al. 1993, 1996) and the island of Kerkira (Halácsy 1908, Stephanides 1940, 1948, Gutermann 1995).

Crassula vaillantii (Willd.) Roth (*Crassulaceae*)

7b, 15.5.1995, Bazos 2390. 7d, 31.5.1994, Bazos 1882. New to Lesbos and the Eastern Aegean. Known until today from Etolia (Halácsy 1901), the islands of Siros (Rechinger 1943), Gavdos (Rechinger 1943, Bergmeier & al. 1997), Agios Evstratios (Snogerup & Snogerup 1991), Naxos (Böhling 1995) and the islets of Strofades (Yannitsaros & al. 1995).

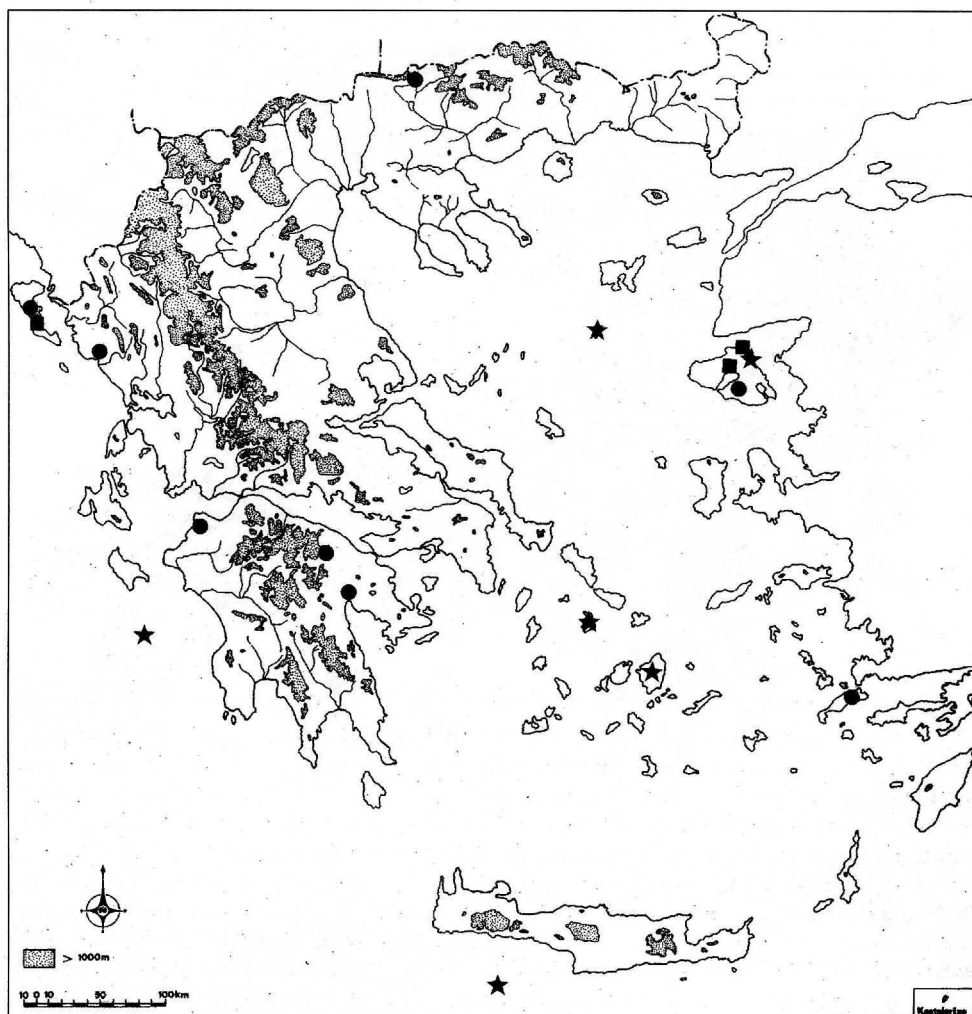


Fig. 2. Known distribution of *Baldellia ranunculoides* (L.) Parl. (●), *Crassula vaillantii* (Willd.) Roth (★) and *Elatine macropoda* Guss. (■) in Greece.

Elatine macropoda Guss. (Elatinaceae)

5, 28.5.1994, Bazos 1824. 6, 5.6.1994, Bazos 1993. New to the Aegean islands. This is the second record of this species from Greece. Known until today only from the island of Kerkira (Halácsy 1908, Stephanides 1940, Gutermann 1995).

Gratiola officinalis L. (Scrophulariaceae)

2, 10.6.1998, Bazos 3208. 3, 7.7.1995, Bazos 2649. New to Lesbos and the Eastern Aegean. Katsikopoulos (1936) reports *G. officinalis* from the island of Samothraki without exact locality or other collection data. The species seems to be more common in the

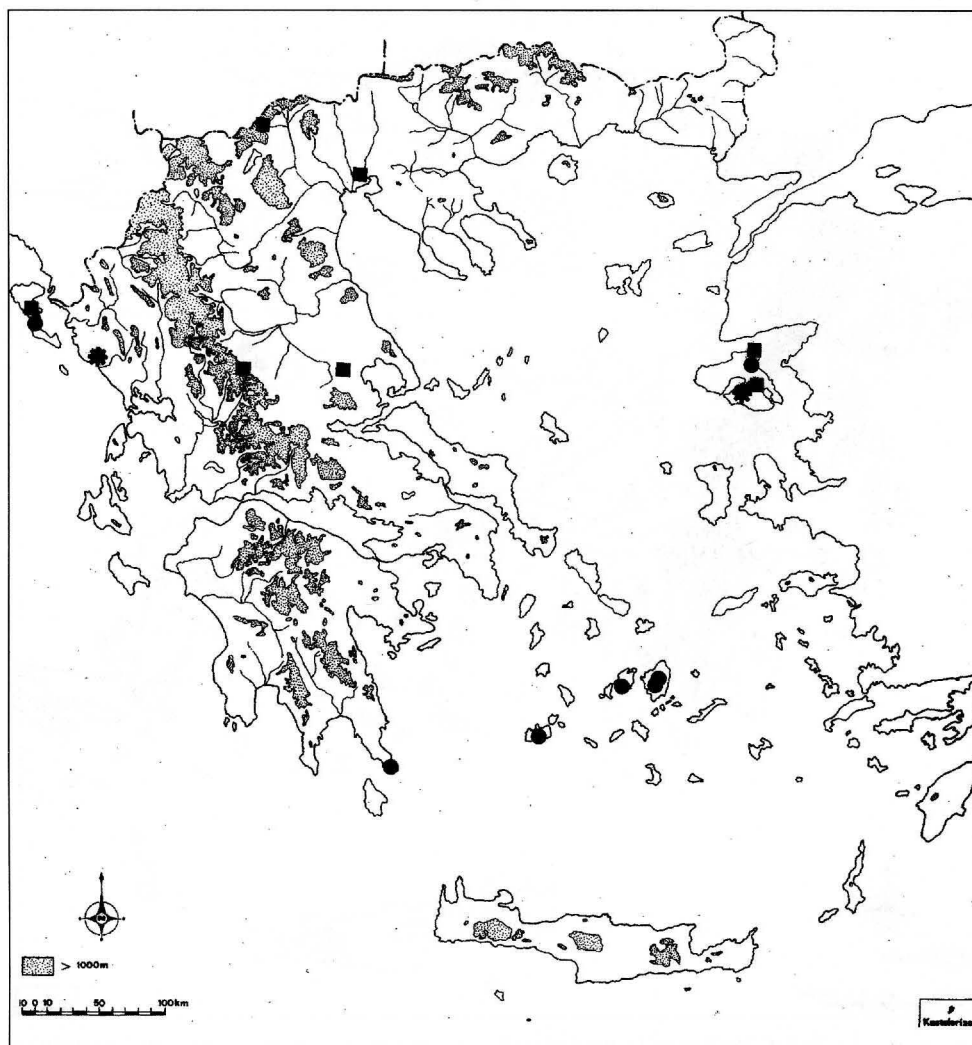


Fig. 3. Known distribution of *Illecebrum verticillatum* L. (●), *Juncus tenageia* Ehrh. (■) and *Myriophyllum alterniflorum* DC. (*) in Greece.

Greek mainland as it is distributed in Peloponnisos, Sterea Ellas, Thessalia, Ipiros, Makedonia and Thraki. Some older reports from the Ionian islands of Lefkada, Kefallinia and Kerkira have not been recently confirmed (see Gutermann 1995).

Illecebrum verticillatum L. (Caryophyllaceae)

7c, 15.5.1995, Bazos 2383. New to the Eastern Aegean islands. It is also distributed in the islands of Kerkira (Halácsy 1901, Stephanides 1948, Gutermann 1995, Hartvig 1997), Milos (Halácsy 1901, Rechinger 1943, Hartvig 1997), Naxos (Runemark & al. 1960,

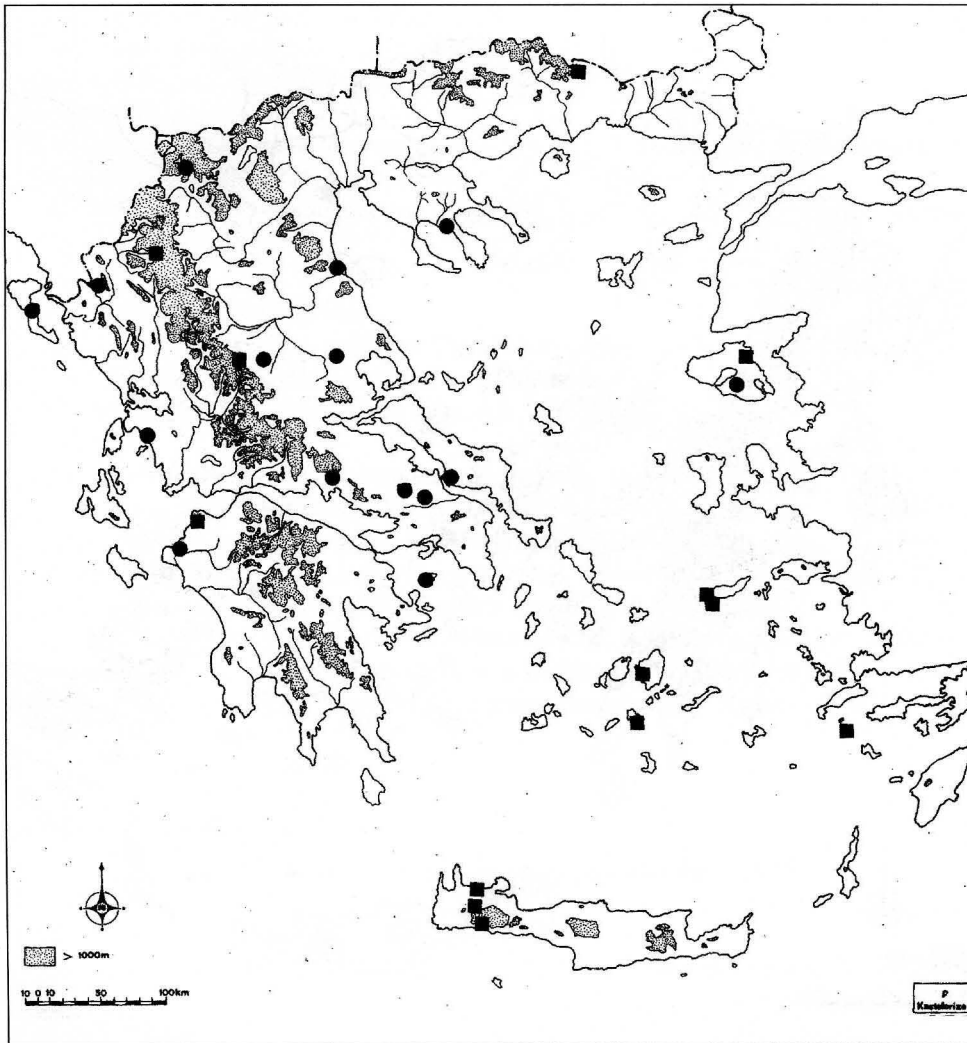


Fig. 4. Known distribution of *Lythrum tribracteatum* Sprengel (●) and *Radiola linoides* Roth (■) in Greece.

Böhling 1995, Hartvig 1997) and Paros (Raus 1996). We have also seen a specimen from Peloponnisos (Promontorium Maleas, 6.4.1956, leg. C. Goulimis in herb. L. C. Pinatzi No 12376). This is the first record of the species from the Greek mainland. Lesvos seems to be the easternmost known limit of its distribution.

Iris pseudacorus L. (Iridaceae)

1, 26.4.1994, Bazos 1692. New to Lesvos. The species is rather rare and scattered in the Aegean islands as it is distributed in Samos (Rechinger 1943), Kriti (Halácsy 1904,

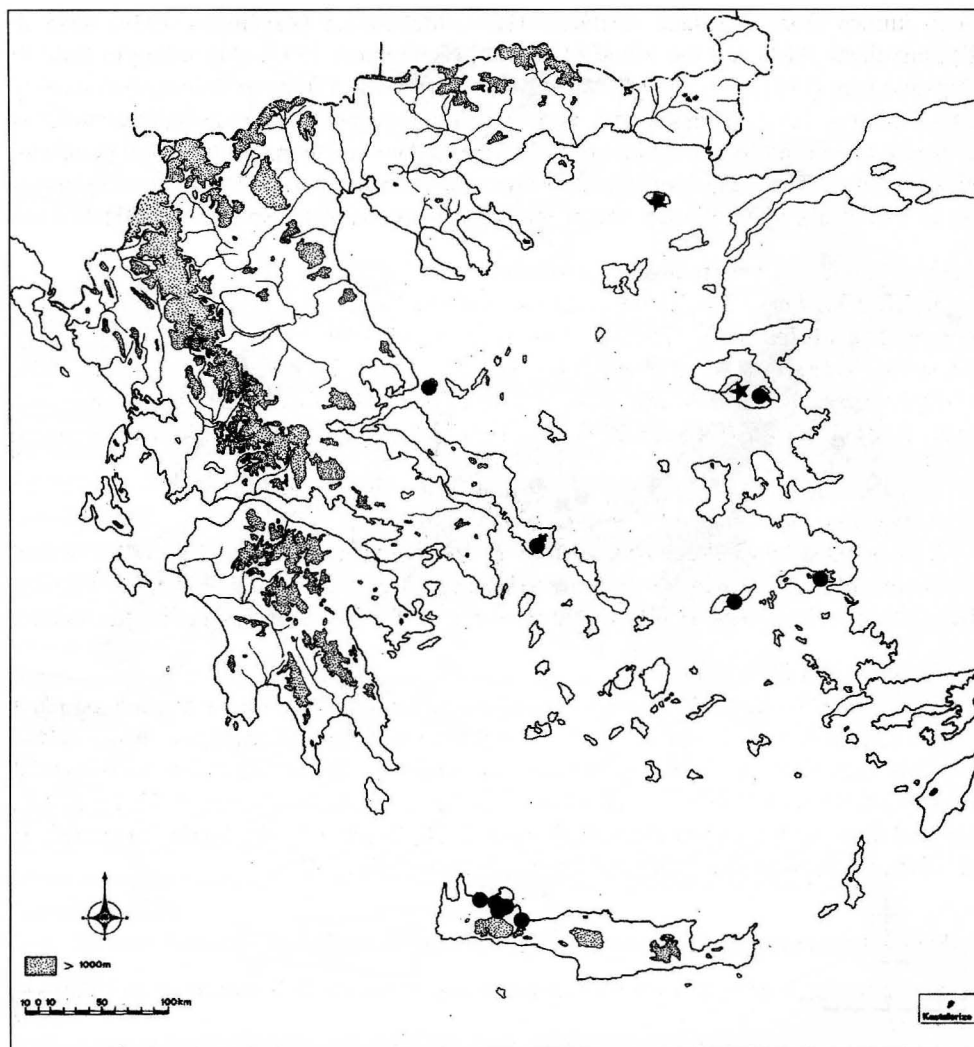


Fig. 5. Known distribution of *Iris pseudacorus* L. (●) and *Gratiola officinalis* L. (★) in the Aegean islands.

Rechinger 1943, Gradstein & Smittenberg 1977, Yannitsaros & Koumpli-Sovantzi 1991, Turland & al. 1993), Evvia (Rechinger 1961), Skiathos (Economidou 1969) and Ikaria (Christodoulakis 1996). It is to be noted that the population of the species in Lesbos is small and threatened by human activities and therefore measures must be taken for its protection.

Juncus tenageia Ehrh. (*Juncaceae*)

3, 25.5.1994, Bazos 1756. 4, 13.5.1995, Bazos 2333. 7a, 31.5.1994, Bazos 1885. 7e, 31.5.1994, Bazos 1866 and 15.5.1995, Bazos 2379. New to Lesbos and the Aegean islands.

Also known from Thessalia (Halácsy 1904), Makedonia (Zaganiaris 1939, Strid & Papanikolaou 1981) and the island of Kerkira (Gutermann 1995). According to Strid & Papanikolaou (1981), Zaganiaris (1939) reports the species from an unidentified locality called Sindos. Nevertheless Sindos is a small town near Thessaloniki and therefore its presence there needs confirmation. It is also reported by Snogerup (1991) but without specific localities. The localities in which we found *J. tenageia* in Lesvos, confirm its character as a calcifuge plant of open, wet or temporarily wet habitats (Snogerup 1985).

Lythrum tribracteatum Sprengel (*Lythraceae*)

3, 7.7.1995, *Bazos* 2647. New to Lesvos and the Eastern Aegean. Also reported from the regions of Ioannina, Karditsa, Voiotia, Ileia and Mt Parnassos (Halácsy 1901), Akarnania (Maire & Petitmengin 1908, Halácsy 1908), Makedonia (Zaganiaris 1938, 1940, Pavlidis 1976) and the islands of Egina (Halácsy 1901, Rechinger 1943, Vallianatou, pers. comm.), Evvia (Halácsy 1908, Rechinger 1943, 1961) and Kerkira (Gutermann 1995).

Myriophyllum alterniflorum DC. (*Haloragaceae*)

3, 16.5.1995, *Bazos* 2420. New to Lesvos and the Aegean islands. This is the second Greek record of *M. alterniflorum*. Reported recently from lake Kalodiki in Ipiros (Sarika-Hatzinikolaou & al. 1994, 1996). Lesvos appears to be the SE known limit of its distribution.

Radiola linoides Roth (*Linaceae*)

7c, 15.5.1995, *Bazos* 2385. New to Lesvos. A rare and very easily overlooked plant which also occurs in Thessalia (Halácsy 1901), Makedonia (Zaganiaris 1940), Thraki (Strid & Papanikolaou 1981), Peloponnisos (Georgiadis & al. 1990) and in the islands of Ios (Runemark & al. 1960), Kriti (Greuter 1973, Gradstein & Smittenberg 1977, Egli 1993, Turland & al. 1993), Naxos (Runemark & al. 1960, Böhlting 1995), Ikaria (Runemark & al. 1960, Christodoulakis 1996) and Nisiros (Burton 1989, 1991).

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