

2nd Mediterranean Plant Conservation Week
"Conservation of Mediterranean Plant Diversity: Complementary Approaches and New Perspectives"
12-16 November 2018, La Valletta, MALTA

Plant species translocation in Mediterranean: lessons from the Antiquity on the meaning and value of the alien species

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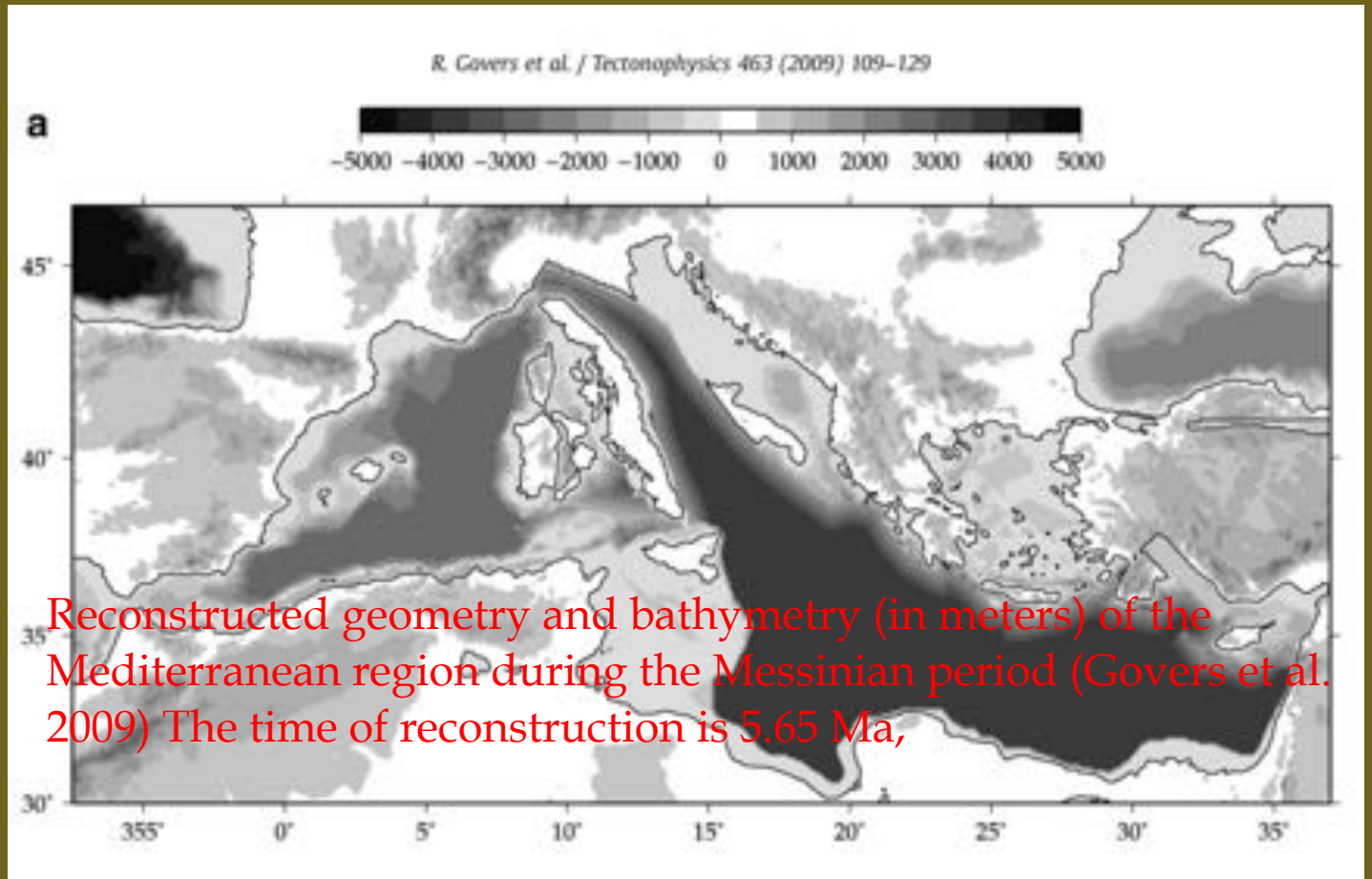
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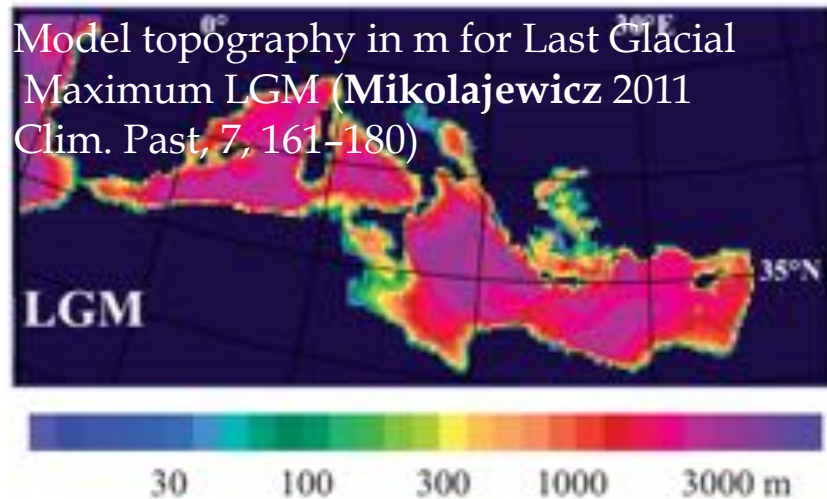
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Question: The high diversity of the Mediterranean flora is always explained by climatic conditions and variability; geology and above all paleogeography and consequently isolation/connection?



Model topography in m for Last Glacial Maximum LGM (Mikolajewicz 2011 *Clim. Past*, 7, 161–180)



Sciandrello, Guarino, Minissale, Spampinato (2015) The endemic vascular flora of Peloritani Mountains (NE Sicily): Plant functional traits and phytogeographical relationships in the most isolated and fragmentary micro-plate of the Alpine orogeny, *Plant Biosystems* 149:5, 838–854



Answer: Not only, humans played an important role on different and varied levels. Many topics could be discussed but another question is: did the Mediterranean globalization, occurred in antiquity mainly with Greek, Phoenicians and after Romans, leave traces in the floristic assemblages, recognizable today?

Phoenician (in yellow) and Greek (in red) cities and colonies around 8th to 6th century BC



<https://en.wikipedia.org/wiki/Phoenici>

https://commons.wikimedia.org/wiki/File:Griechischen_und_ph%C3%B6nizischen_Kolonien.jpg

Materials and Methods

The study is based on data from literature, herbarium specimens and field researches in order to pointing out the exact distribution of selected species in Mediterranean area.



The case of *Sarcopoterium spinosum* (L.) Spach



Rosen, Galili and Weinstein-Evron Thorny burnet in a Roman shipwreck

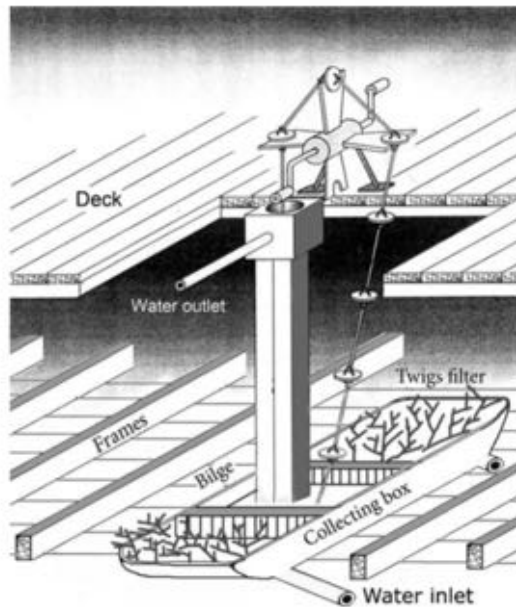


Figure 13 Stylised diagram of a Roman bilge pump, showing the location of the part found at Hahotrim. E. Galili and B. Galili

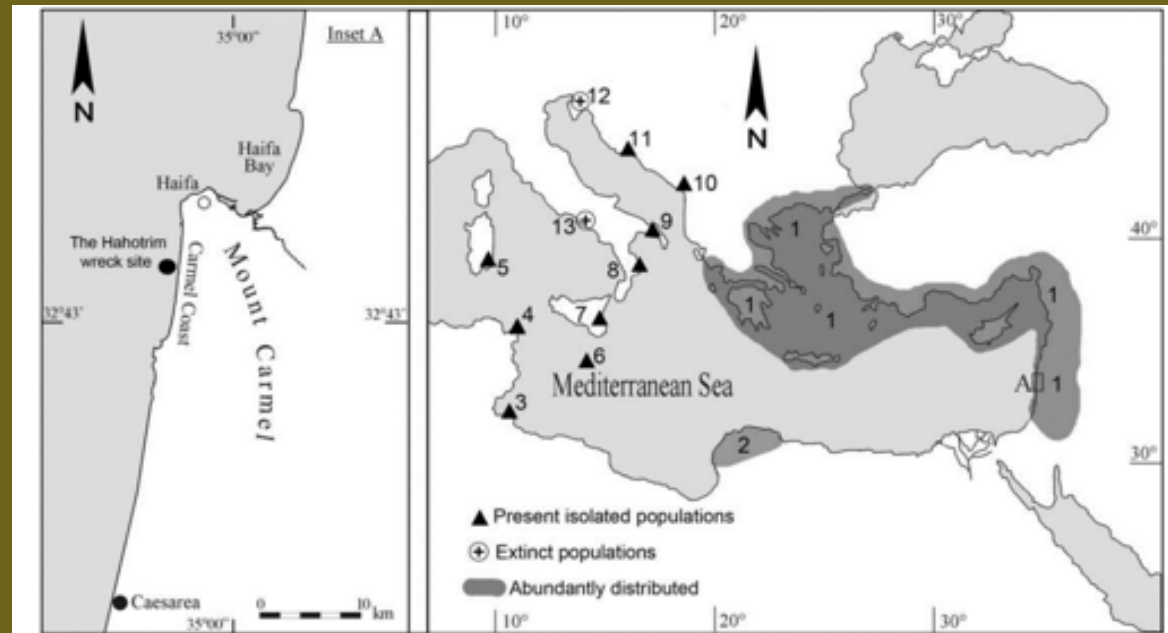


Figure 1 Map showing the East/Central Mediterranean and Northern Israel, the location of the Hahotrim wreck site and other places mentioned in the text and the recent and present distribution of *S. spinosum*: 1 – Continuous distribution, Greece, Turkey and the Levant; 2 – Libya; 3 – East Tunisia shore; 4 – Tunis Bay; 5 – Sardinia; 6 – Malta; 7 – East Sicily; 8, 9 – South Italy; 10, 11 – Dalmatia; 12 – North Adriatic sea; 13 – Tivoli, Central Italy. E. Galili, B. Galili

Rosen et al .2009. Thorny burnet (*Sarcopoterium spinosum* L.) in a Roman shipwreck off the Israeli coast and the role of non-timber shrubs in ancient Mediterranean ships. *Environmental Archaeology* 14: 159-171.

Origanum onites L.



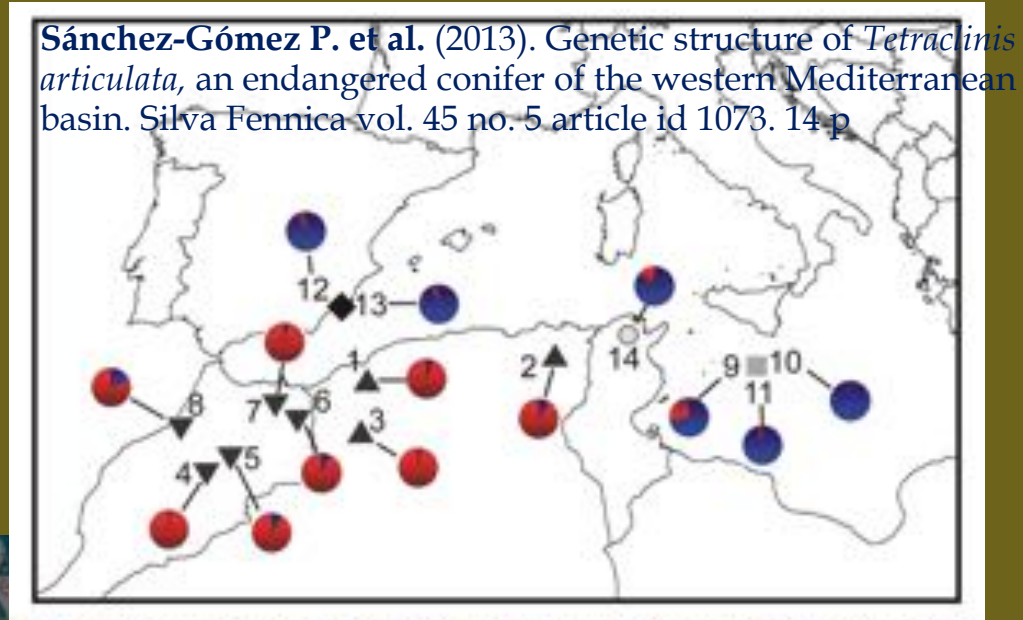
Syracuse 30.05.2013

Minissale P, Trigilia A, Brogna F, Sciandrello S (2015). Plants and vegetation in the archaeological park of Neapolis of **Syracuse** (Sicily - Italy). A management effort but also an opportunity for a better enjoyment of the site. Conservation and Management of Archaeological Sites 17 (3): 340-369

Distribution of *Origanum onites* in Mediterranean



Tetraclinis articulata (Vahl) Masters



Population	
Algeria	
1	Zemmora
2	El Fedjoudj
3	Saida
Morocco	
4	Khenifra
5	El Ksiba
6	Oujda
7	Hassi Berkane
8	Ain el Aouda
Malta	
9	Wied Mizieb
10	Argotti
11	Gnien Ingraw
Spain	
12	Cenizas
13	Sabinar
Tunisia	
14	Cape Bon

Rhus tripartita (Ucria) Grande



Distribution from Brullo et al. 1998

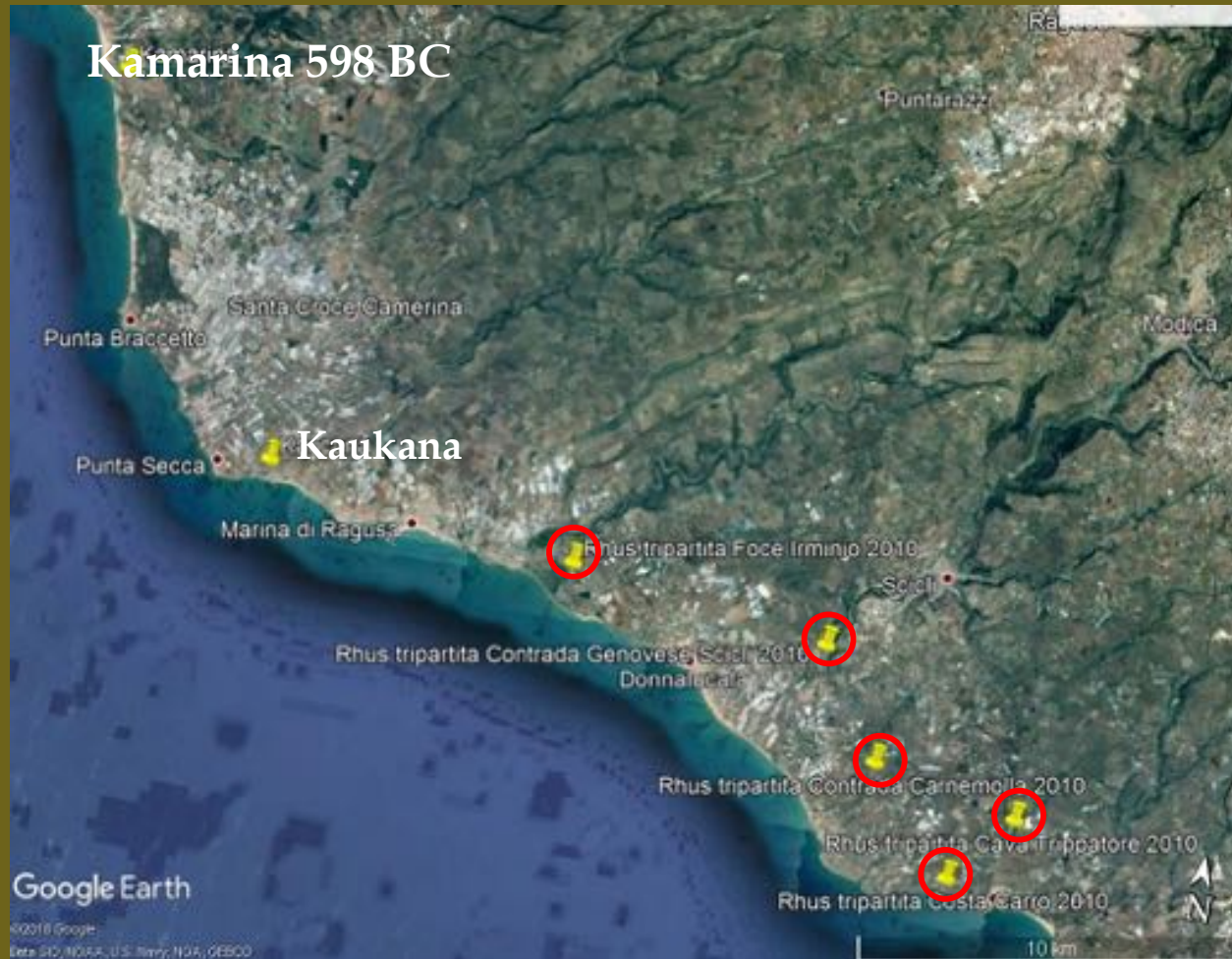
Brullo, Grillo & Guglielmo, 1998.
- Considerazioni fitogeografiche
sulla flora iblea. *Boll. Acc. Sci.
Nat.*, **29** (352), 45-111.

Rhus tripartita (family Anacardiaceae) has been traditionally used to treat a wide range of ailments (Shahat et al. 2016). In particular in Tunisia it is a plant which is traditionally used for the treatment of ulcer and diarrhea (Barka et al. 2017).

Shahat et al. 2016 Treatment with *Rhus tripartita* extract curtails isoproterenol-elicited cardiotoxicity and oxidative stress in rats *BMC Complementary and Alternative Medicine* 16:351

Barka et al. 2017 Protective effects of edible *Rhus tripartita* (Ucria) stem extract against ethanol-induced gastric ulcer in rats . *Journal of Functional Foods* 30: 260–269

Rhus tripartita (Ucria) Grande in Italy



In 405 BC Carthaginians sacked Kamarina and in the same year a peace treaty was signed which confirmed Carthaginian control over Selinus, Akragas, Gela and Kamarina

Rhus pentaphylla (Jacq.) Desf.



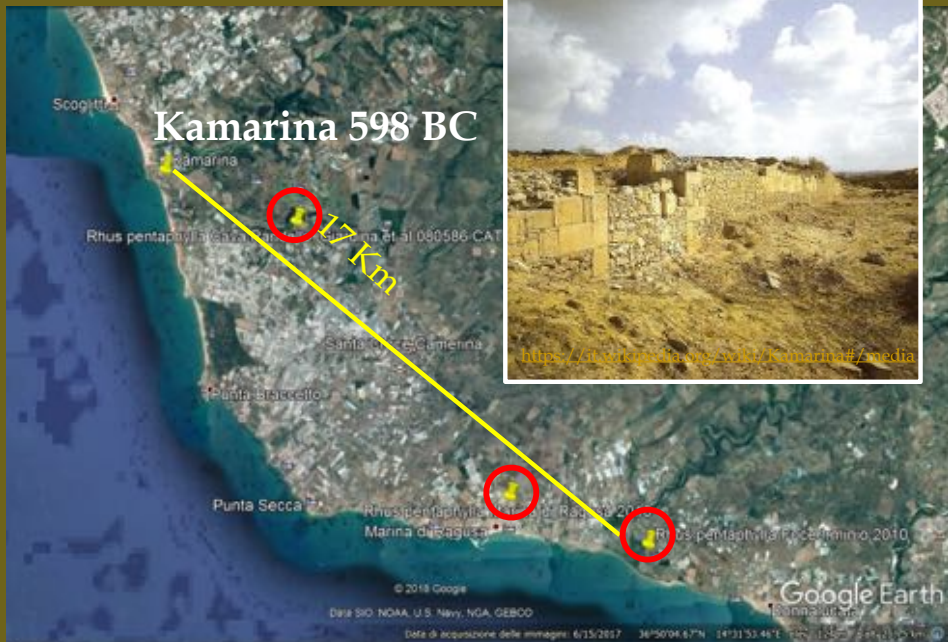
Distribution from Brullo et al. 1998

Due to their high contents in phenols, flavonoids and other phytochemicals, *Rhus* species are widely used in both modern and traditional medicine. The extracts showed antimalarial, antimicrobial, antitumorigenic, antioxidant, antiviral, hypoglycaemic, leukopenic atherosclerosis and anticonvulsant properties (Itidel et al. 2013)

Rhus pentaphylla (Jacq.) Desf.



Sicily



Lebanon - Israel



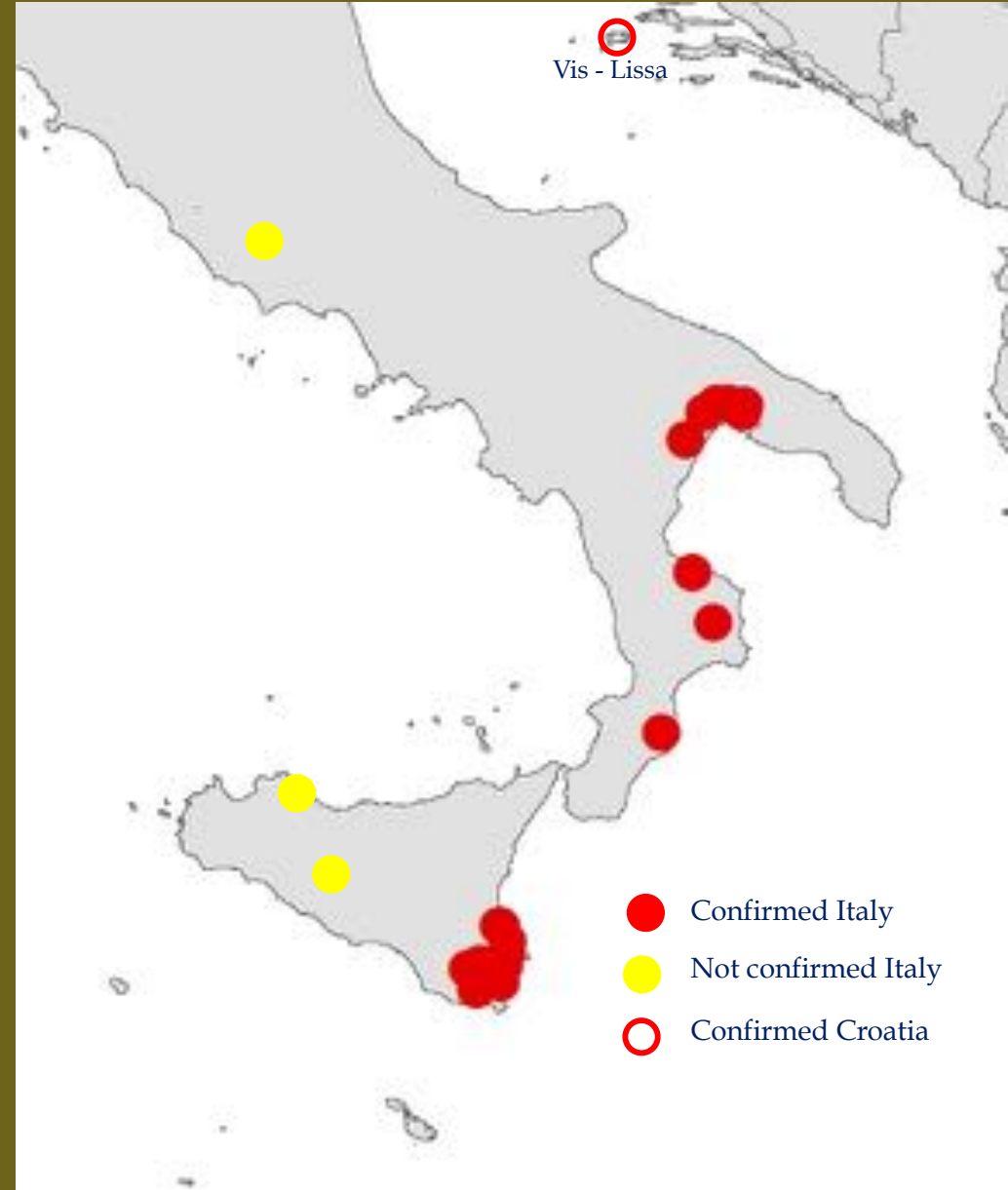
Palermo was founded as a port-city by the Phoenician settlers of Tiro (today's Lebanon) between the 7th and 6th centuries BC Solunto was founded Phoenicians e and after occupied by Greek colonists.

The only one location of *Rhus pentaphylla* in East Mediterranean

Salvia fruticosa Mill.



Distribution from Liber et al. 2014



Liber Z. ; Radosavljević, I.; Bogdanović, S.; Satovic, Z. N. 2014 .Natural hybridization between *Salvia officinalis* L. and *Salvia fruticosa* Mill. (Lamiaceae) on the island of Vis (Croatia): evidence from morphological and molecular data. Book of abstracts - 8th Conference on Medicinal and Aromatic Plants of Southeast European Countries . Tirana

Salvia fruticosa in Apulia and Basilicata



Salvia fruticosa Mill. in Calabria



Sybaris

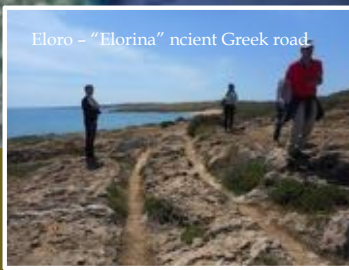


R. Tundis, M. R. Loizzo, M. Bonesi, M. Leporini, F. Menichini & N. G. Passalacqua 2018. A study of *Salvia fruticosa* Mill subsp. *thomasi* (Lacaita) Brullo, Guglielmo, Pavone & Terrasi, an endemic Sage of Southern Italy, *Plant Biosystems* 152 (1): 130-141

Salvia fruticosa in Sicily



○ *Salvia fruticosa*



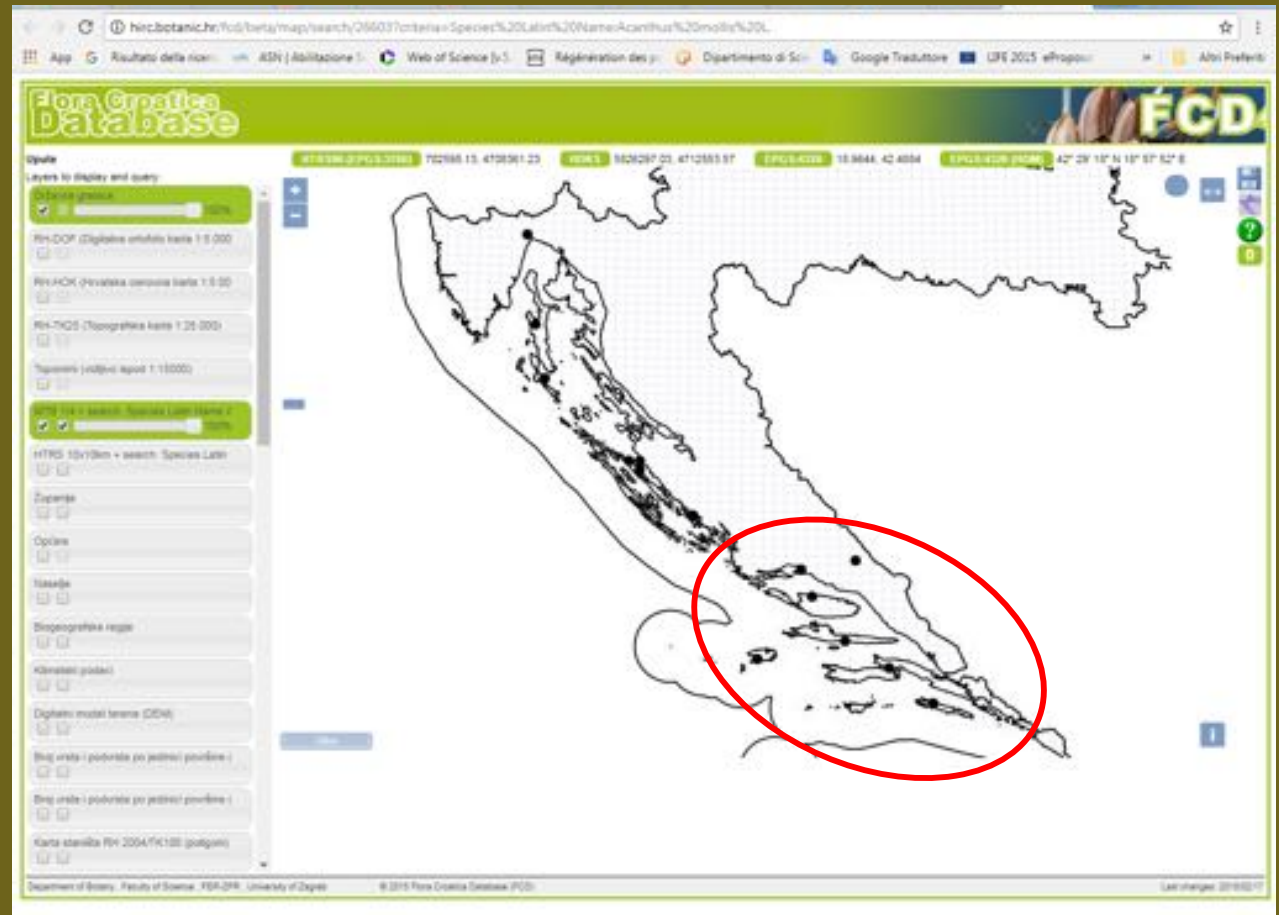
Acanthus mollis L.

Acanthus mollis L., is West Mediterranean species, although many Mediterranean countries Floras are in contradiction with respect to its native distribution.



Acanthus mollis probably native distribution (draft). North Africa *Acanthus mollis* subsp. *platiphyllus*; Centre Mediterranean *Acanthus mollis* subsp. *mollis*

In Syracuse, *A. mollis* is widespread. From this city, probably, the acanthus was brought to Dalmatia. Today it is in fact present almost exclusively in the Adriatic islands which were Syracusan colonies



Minissale et al. 2018 Why did *Acanthus mollis*, native of West Mediterranean, become a so relevant artistic and symbolic element arising from ancient Greece? *Flora Mediterranea*: in press

Thanks
for your attention!

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