

RUMEX VESICARIUS (POLYGONACEAE) IN THE EASTERN MEDITERRANEAN REGION

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Abstract. The occurrence and distribution of *Rumex vesicarius* L. in Greece and adjacent eastern Mediterranean is described. New localities from the Greek Aegean Islands are provided.

Key words: *Rumex vesicarius* L., geographical distribution, Mediterranean region, Greece, Aegean Islands

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Rumex vesicarius L. is a herbaceous annual with thick, slightly fistulose, branched stems up to 30–40(–80) cm tall and rather fleshy, trullate or hastate leaves (Fig. 1). The species is easy to recognise on account of the large, conspicuous, membranous valves of the fruit which are 12–18 (–23) mm long and wide. It belongs to the subgenus *Acetosa* (Campd.) Rech. f., occupying a taxonomic position near the closely related *R. simpliciflorus* Murb. and *R. cyprius* Murb.

The main distribution area of *R. vesicarius* is the Arabian Peninsula, Near East and northeastern Africa. The northern limits are through central Iraq, the southwestern part of Saudi Arabia and the Sinai. North of this line there are isolated stands situated at the border between Israel and Jordan. In northeastern Africa the species occurs in eastern Egypt and Sudan. From here *R. vesicarius* extends along the coasts of the Mediterranean Sea to northwestern Africa and the Canary Islands. From the Arabian Peninsula it spreads to southern Iran, Afghanistan, Pakistan and the Punjab.

R. vesicarius occurs at low altitudes between sea level and 1000 m, however, in Central Sahara it reaches 2800 m (Maire 1961). In Iran it is generally found between 550 and 2000 m, in Pakistan between 100 and 1600 m, and in Iraq from 100–750 m (Rechinger 1964a, 1968). The species



Fig. 1. *Rumex vesicarius* L. on the stony river bank between Melona and Haraki, the island of Rodhos. Phot. K. Browicz.

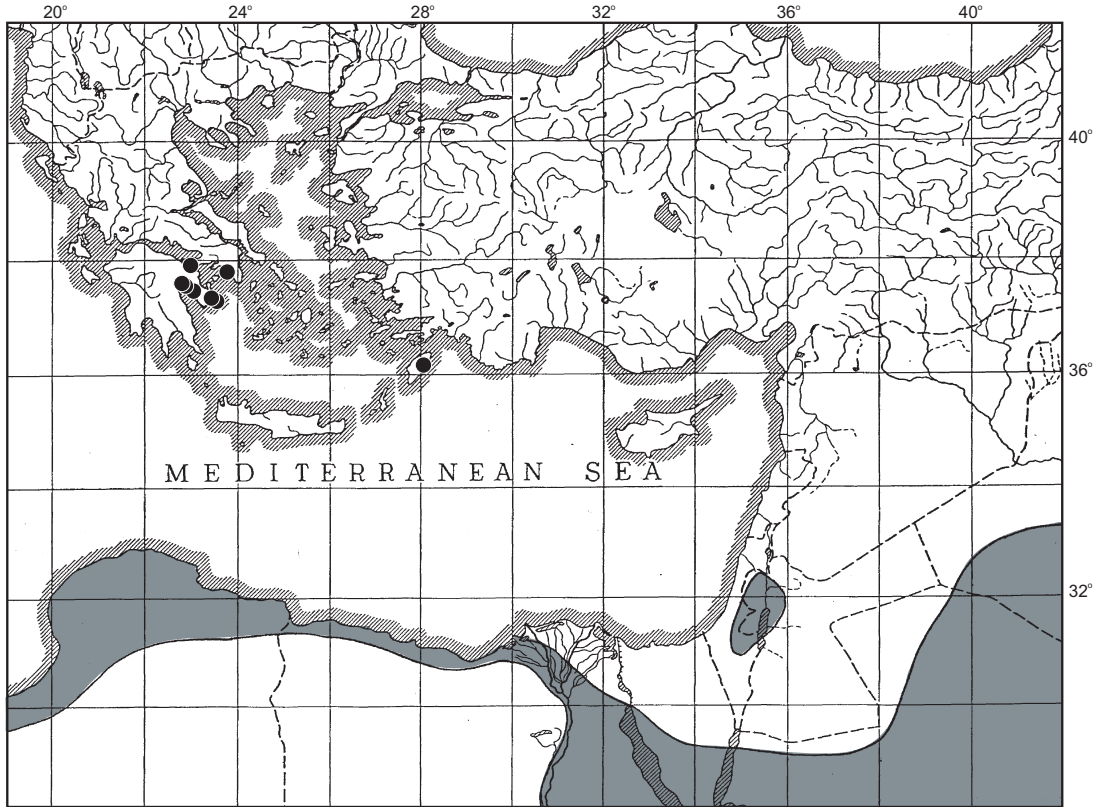


Fig. 2. Distribution of *Rumex vesicarius* L. in the eastern Mediterranean region.

exists with other annuals, usually in open unsheltered places without shrubs, on gradual stony slopes, stony banks of streams and rivers, in dry river beds, near marshes, in stony steppe, desert and semi-desert, on shallow sand or sandy dunes, in coastal rock crevices, roadsides and disturbed ground. It avoids limestone and granitic rock as well as substrates derived from these. The plants flower after the rainy season, usually from mid-January in the desert region to August in less arid areas. The large light fruits, ripening 2–3 months later, are easily dispersed by wind and water. Leaves of *R. vesicarius* are eaten locally as a vegetable, green or cooked, or used as a laxative, tonic, etc. According to Mandaville (1990) the plant is sometimes added to increase acidity in the preparation of 'iq't' or dried milk curds. In semi-

desertic regions the plant is a valuable fodder for domestic herds, e.g., goats and cattle.

Zohary (1966) classified *R. vesicarius* as a Saharo-Arabian taxon extending into the Mediterranean and Sudanian regions. According to the divisions as proposed by Browicz (1997) we classify it as an Afro-Sindian species.

In Europe, *R. vesicarius* is known so far, only from Italy and Greece (Greuter *et al.* 1989). It was noted in Sicily as early as 1757 (Saccardo 1909; Fiori 1923, 1933; Viegi *et al.* 1974) and had obviously been introduced, probably as a vegetable but had escaped from cultivation. In Greece the species was found in 1847 by J. Sartori (and again in May 1855), and independently by Th. von Helldreich in the vicinity of Navplion (Nomos Argolidos) in NE Peloponnisos (Halácsy 1904); its exist-

ence there, however, had been treated with caution (Rechinger 1964b; Jalas & Suominen 1979). The plant was observed by Bowen in the same place and surrounding area almost 130 years later, in 1978 (Akeroyd & Preston 1987). Since then several reports have been confirmed from the same area (Snogerup & Snogerup 1997). In 1985, *R. vesicarius* was collected by Strid in Loutraki near Korinthos and again in the same area in 1991 during a students' excursion (*Strid 24402, Strid et al. 31905*, vouchers at C). It was noted by Landström in 1979 ca 2 km ENE of Glyfada (*Landström 4323*, voucher at LD).

In 1985 one of us (K.B.) photographed this interesting plant (Fig. 1) on the island of Rodhos, on the stony river bank between Melona and Haraki. He also found this species on the Aegean island of Hydra in 1999 (voucher at KRAM). Not surprisingly, it had been noted in 1986 by Strasser at Ermioni, on the mainland opposite (*Strasser s.n.*, voucher in hb. Greuter, Berlin). Several fruiting specimens were observed on the stony roadside halfway between Hydra and Mandraki. We believed these records were the first documentations of the occurrence of *R. vesicarius* on the Aegean Islands; however, we have recently learnt that G. Sfikas (2000) from Athens had already recorded *R. vesicarius* from Hydra.

The origin of *R. vesicarius* in Greece is still unclear. It seems to be an alien and on Rodhos and Hydra it is certainly a recent introduction. All localities of *R. vesicarius* have been found or rediscovered in E Peloponnisos and the Aegean islands within a relatively short period of time allowing us to postulate that the species had spread easily and rapidly and is well on the way to become a permanent member of the Greek flora (Fig. 2).

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