

Onobrychis aliacmonia RECH.f. – a new slant on an old story

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Abstract

Onobrychis aliacmonia RECH.f. discovered in 1956 and described in 1973 by KARL HEINZ RECHINGER from the Aliakmon valley in north central Greece, was believed to represent a clear case of extinction and indeed the only unambiguous such event so far recorded for any Greek endemic. It was considered conspecific with a plant collected from the Lakonia province in the Peloponnese, southern Greece, first detected by Walter Strasser, a Swiss biology teacher. The discovery and identification of this Peloponnese taxon was documented in detail in an interesting paper by WERNER GREUTER in 1987. Kit Tan and Gert Vold have recently discovered large populations of more than 30,000 individuals of *O. aliacmonia* in two localities in the Aliakmon valley, one of them not previously listed. The plant from the Peloponnese proves to be a hitherto undescribed new taxon, and its affinities to a Turkish species are given.

Key words: Flora of Greece, Turkey; Leguminosae (Fabaceae), *Onobrychis aliacmonia* ssp. *aliacmonia* and ssp. *peloponnesiaca*, *O. hypargyrea*; endemism, threatened plants, rediscovery.

Zusammenfassung

Die 1956 im Aliakmon-Tal in Nordgriechenland entdeckte und 1973 beschriebene *Onobrychis aliacmonia* RECH.f. schien ein klarer und unzweifelhafter Fall für das Aussterben einer Art. GREUTER (1987) dokumentierte die Entdeckung einer Sippe auf dem Peloponnes, die als konspezifisch betrachtet wurde. Kürzlich wurde *Onobrychis aliacmonia* an zwei Stellen in großen Populationen von mehr als 30.000 Pflanzen wiederentdeckt. Die Sippe vom Peloponnes erwies sich als bisher unbeschriebenes Taxon, dessen Ähnlichkeiten zu einer türkischen Art diskutiert werden.

Onobrychis aliacmonia RECH.f. was discovered by Professor Karl Heinz Rechinger, jointly with Constantinos N. Goulimis in July 1956, and was at first tentatively identified as *Onobrychis hypargyrea* BOISS., an Anatolian species thought to extend to southernmost Yugoslavia. Years later, RECHINGER (1973) recognized its distinctness and published it as a new species together with a detailed description and good illustration.

In 1976, a dam constructed across the Aliakmon river in north central Greece caused the flooding of the middle part of the valley, turning it into a large artificial lake. The shores of this lake (now called Polifito lake) was the locus classicus of *O. aliacmonia*, which vanished in 1976, supposedly destroyed by flooding. Despite several efforts in the 1970s and 80s to relocate it, *O. aliacmonia* could not be found. Thus in 1982, it was listed by the IUCN Threatened Plants Committee as "believed extinct" - and to represent the only unambiguous case of extinction for any Greek endemic.

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A plant stated to have completely disappeared from the face of the earth holds a very special interest. Matters became even more intriguing when Professor WERNER GREUTER published, in 1987, a detailed description of the rediscovery and identification of *O. aliacmonia* from the province of Lakonia in the southern Peloponnese. The plant was first detected by Walter Strasser, a Swiss biology teacher, who sent sterile and, later, flowering material to Greuter at Berlin. As Greuter himself had collected *O. aliacmonia* from the Aliakmon valley in 1973 and had also stated the species to be extinct in 1979, his previous experience allowed him to recognise the plant as *O. aliacmonia*. Indeed, it was probably as familiar to him as the proverbial "rose in spring" and he had no hesitation in stating it as conspecific with the Aliakmon taxon. This became the subject of a delightfully readable paper published in Plant Systematics and Evolution, appropriately enough, in honour of Rechinger's 80th birthday. A thoughtful botanist might wonder that a plant discovered so far south in the Peloponnese, c. 400 km away from the locus classicus and occupying a very different habitat, should in fact be identical, though strange and unusual disjunctions sometimes occur.

In June 1994, Kit Tan went with Gert Vold from the Copenhagen Botanical Garden to the north side of Polifito lake and were surprised to find plants which could be nothing else than *O. aliacmonia* in full flower. There were thousands of them. The lake shore at 280 - 300 m and the hill slopes above were completely carpeted; the substrate was a characteristic dry white marly soil widespread in many parts of the valley. On the south side of the lake, *O. aliacmonia* was even more abundant. It grew on the same kind of soil, on roadside slopes, in ditches, at the edge of cultivated and irrigated fields. This new locality had not previously been documented.

The plants occurred in great numbers. There must have been at least 30,000 individuals judging from a quick count. This prompted Vold to ask if there was any real need to collect the species. When informed that the taxon was considered extinct, he decided to harvest seed for distribution and for the seed collection at Copenhagen. He also took voucher specimens to distribute.

Gregory Iatrou had seen an *Onobrychis* in the Peloponnese many years ago which he thought might be *O. aliacmonia* as it was from the area where Strasser had collected plants in 1985 and 1986. As he had never seen *O. aliacmonia* before, he could not be sure if it was the same taxon; he did not make herbarium specimens, being keen not to deplete a plant population which was still rather small. Both the present authors and Gert Vold accordingly visited the Peloponnese together to find the taxon Strasser had sent to Greuter. They found it, not quite in the same locality but in the same area, 1 - 3 km further away on the road from Skala to Molai, near the village of Vlachiotis, on low sandy hills at an altitude of 120 - 130 m. At the time of rediscovery they were surprised to note that not one of the plants associated with it was common in the Aliakmon valley in northern Greece.

With greater familiarity with *O. aliacmonia* at this stage, it was realised at once there was something different about the Peloponnese plant – the fruits were dissimilar. Greuter surely can be excused for not noting this – he had only seen the plant in flower. Both the plants from the Aliakmon valley and the plants from the Peloponnese have very similar cream-coloured flowers with the standard veined orange-pink (colour plate on front cover).

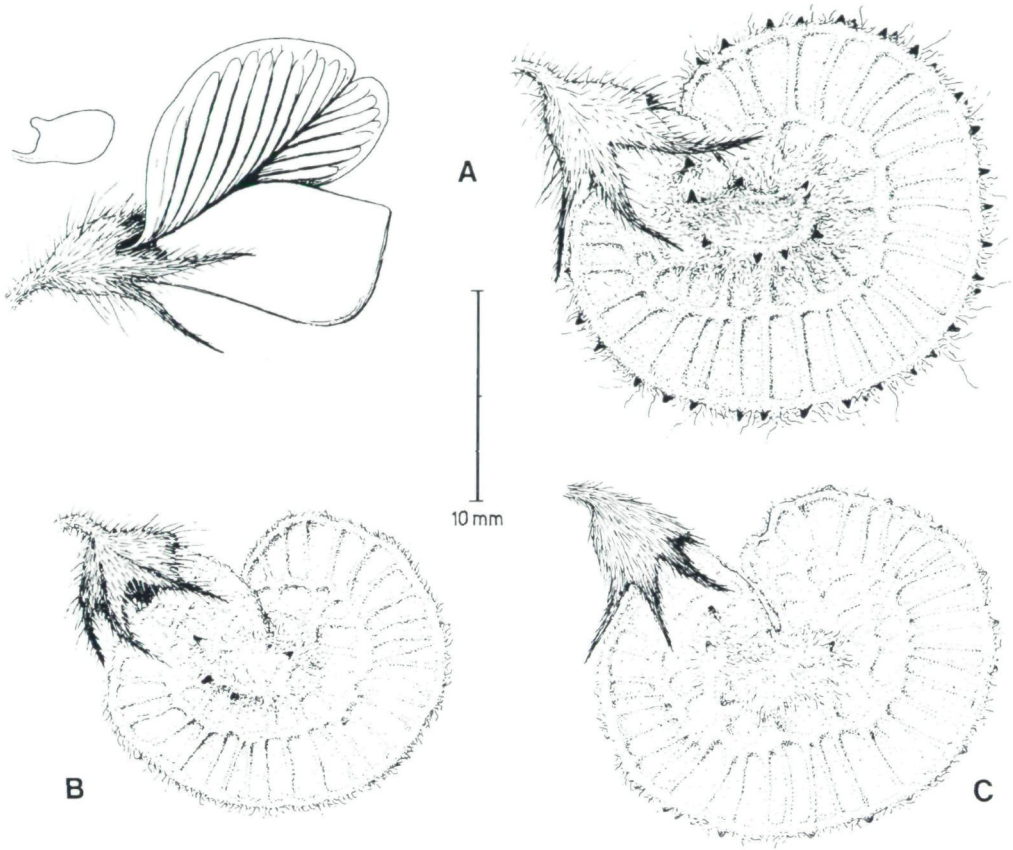


Fig. 1: (A) *Onobrychis aliacmonia* ssp. *peloponnesiaca* flower and fruit, (B) ssp. *aliacmonia* fruit, (C) *O. hypargyrea* fruit.

The Peloponnese taxon (Fig. 1A) differed from the Aliakmon material (Fig. 1B) by its much larger fruits with spiny-denticulate, orange-red margins. It was decided to name the Peloponnese plant, *O. aliacmonia* ssp. *peloponnesiaca*. A formal description follows. Its nearest ally is *O. hypargyrea* BOISSIER from Turkey but it can easily be distinguished by its white-villous indumentum which does not darken to golden-brown with age. The indumentum in *O. hypargyrea* is dense, tawny-yellow and velutinous-tomentose. The fruit in *O. hypargyrea* (Fig. 1C) is tomentose, with a subentire crest or with short teeth, and the disc with or without short hard curved spines. *O. hypargyrea* in Turkey flowers during April to June, at moderate altitudes of 300 - 1300 m. It grows often on rocky limestone slopes and fallow fields and was first described by BOISSIER in 1843 based on material collected in Turkey, from the vilayet of Manisa, above the town of Dervend. Although both HEDGE (1970) and RECHINGER (1973) state it to be in the Balkans, it is actually a Turkish endemic, with a distribution mainly in outer Anatolia, extending eastwards to 34° E.

Description of new taxon

Onobrychis aliacmonia RECH.f. ssp. *peloponnesiaca* IATROÚ & KIT TAN, ssp.n.

A ssp. *aliacmonia* leguminibus multo majoribus, margine spinoso-dentatis (non integris vel subintegris) diversa. Ab *O. hypargyrea* BOISSIER, specie proxima, indumento albo-villoso (non dense velutino-tomentoso, fulvo-luteo), provecta aetate non in aureum fuscescente facile distincta.

Suffrutescent perennial with several erect-ascending stems up to 75 cm, and a patent white-pilose indumentum especially at base. Leaves with 4 - 7 pairs of oblong-ovate leaflets; leaflets 10 - 30 x 5 - 17 mm, densely white adpressed-pilose and greyish-green above (hairs exceeding margins), glabrous and yellowish-green beneath, obtuse-apiculate. Stipules free, green to greyish-brown, 7 - 15 mm. Peduncles generally longer than leaves. Inflorescence many-flowered, elongating in fruit. Calyx 7 - 10 mm, including 4 - 5 mm teeth. Standard 14 - 16 mm, cream or creamy-yellow, veined reddish-orange; keel 12 - 14 mm, pale lemon yellow to almost cream. Fruit 15 - 22 x 12 - 16 mm, white-tomentose, glaucous-green; margins of crest orange-red, with short teeth; disc with short hard curved spines. Flowering May to June. Fig. 1A and colour plate on front cover (left side).

Type: Greece, Peloponnisos: Lakonias, Epidavrou Limiras. South of Vlachiotis on road to Molai, sandy hill slopes, 100 - 150 m, 23. May 1994, Kit Tan & G. Vold 14110 [holo. C; iso. ATHU, UPA].

The vegetation in the type locality consisted mainly of macchie remnants and phrygana. The following taxa were dominant at the time of collecting: *Quercus coccifera* L., *Pistacia lentiscus* L., *Calicotome villosa* (POIR.) LINK, *Ceratonia siliqua* L., *Olea europaea* L. ssp. *oleaster* (HOFFMANN. & LINK) NEGODI, *Arbutus andrachne* L., *Lavandula stoechas* L., *Phlomis fruticosa* L., *Erica arborea* L., *Thymelaea tartonraira* (L.) ALL. ssp. *argentea* (SM.) HOLMBOE, *Cistus creticus* L., *C. salviifolius* L., *Sarcopoterium spinosum* (L.) SPACH, *Phagnalon graecum* BOISS. & HELDR., *Coridothymus capitatus* (L.) RCHB.f., *Helichrysum barrelieri* (TEN.) GREUTER, *Prasium majus* L., *Globularia alypum* L., *Crupina crupinastrum* (MORIS) VIS., *Hypericum empetrifolium* WILLD.

STRASSER (1985) cited only a single endemic in the area - *Linum leucanthum* BOISS. & SPRUNER but this is in error for the recently described *L. phitosianum* CHRISTOD. & IATROÚ which occurs in the type locality together with several other Greek endemics, e.g., *Tulipa goulimyi* SEALY & TURRILL, distinctive by its felted bulb tunics, *Scorzonera crocifolia* SM. and *Ebenus sibthorpii* DC., the latter an outlier of a genus with most of its other representatives much further east in Asia. The puzzling *Astragalus thracicus* listed by STRASSER is highly unlikely as this tragacanth is a mountain steppe plant and it is possible that it may be a new taxon with affinities to *A. creticus* instead; the same species also occurs in the Malea Peninsula, the easternmost prong of the Peloponnese, and is currently under investigation by the authors of the present paper.

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