

On the identity of *Scorzonera doriae* (Asteraceae) and *Athamanta densa* (Apiaceae), two taxa collected by Antonio Baldacci in South Albania

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Abstract. A study of *Scorzonera* taxa collected by Antonio Baldacci in Albania together with recently collected material from the Sarandoporos river confirmed the presence of *S. lafranchisiana* and absence of *S. doriae* from riverbeds in Albania. The latter is a high altitude serpentinophyte. The investigation of *Athamanta densa* reported by Baldacci from Mt Çika in S Albania revealed a misidentification with *A. turbith*. *Athamanta densa* does not occur in Albania but is a Greek endemic restricted to Mts Parnassos and Olympus.

Key words: Albania, *Athamanta densa*, Baldacci, Greece, *Scorzonera*, taxonomy

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Introduction

During the late 1800s and early 1900s, the Italian botanist-diplomat Antonio Baldacci (1867–1950) undertook several botanical expeditions to Albania. In 1892, he explored the areas south of Vlora, the Karaburun-Acroceraune mountain range, Griba and Tomorri Mts. In 1894 he returned to the mountains on both sides of the Shushica River, focusing on the eastern slopes of the Acroceraune range, Çipini, Kendërvica and the Griba Mts on the right side of the Shushica River. From 3 to 21 July 1894, he explored the areas between Tepelena and Permeti, including

the mountains of Trebeshina and Zagoria provinces where the central part of the Vjosa River flows. Towards the end of July 1894, he extended his floristic investigations to the Nemërçka and Makrikambo Mts, passing through the valley of Zagoria and from there to the mountains along the Drino Valley.

Baldacci also devoted the first week of July 1896 to the southern parts of Albania which were not visited during his two first expeditions of 1892 and 1894. While stationed at Sarandoporos and relaxing in the thermal baths with their curative waters, he collected the flora of Melesin Mt, the region around Leskovik, as well as the Nemërçka mountain area bordering Greece.

During the summers of 1897 and 1900–1902 he visited the central and northern parts of Albania, completing his floristic investigation of the country with a collection of *ca.* 100 000 plant numbers (Hoxha 2018). He died at the age of 83 but had published 46 species as author or co-author (IPNI 2024) of which 14 taxa were erroneously named, six others with a current taxonomic status higher or lower than as originally described, while the remaining 26 are accepted at the same taxonomic level as originally published. Three species *Achillea baldaccii* Degen, *Crepis baldaccii* Halácsy and *Wulfenia baldaccii* Degen were named after him based on his collections (Lack & Barina 2020). *Astragalus autranii* Bald. (rediscovered, see Tan & al. 2015), *Hypericum haplophyllodes* Halácsy & Bald., *Onosma mattiroliae* Bald. (reported from Greece in error for *O. pygmaea* Riedl) and *Wulfenia baldaccii* Degen are rare and interesting Albanian endemics with narrow restricted distributions. Some taxa collected by Baldacci within the present-day political borders of Albania have not been confirmed, e.g., *Athamanta densa* Boiss. & Orph., *Centaurea nicolai* Bald., *Centaurea deusta* Bald. (described as *C. leucomelaena* by Hayek in 1931), *Scorzonera albanica* Bald., and deserve investigation as to their correct identity.

Materials and methods

The study was based on field data and observations carried out during 2019–2024. It follows the itinerary of Baldacci in South Albania for the years 1892, 1894 and 1896. The field expeditions have focused on the Acroceraune mountain range, the mountains of Kendërvica, Tomorri, Ostrovicë, Valamarë, and the Nemërçka-Dhëmbel-Trebeshina range. Herbarium material from ATH, BRNU, COI, K, TIR, W and WU (abbreviations according to Thiers 2024) and the personal collections of Kit Tan and Shuka (herb. Shuka) have been consulted. Material of new records for the flora of Albania is deposited at the National Herbarium of Tirana (TIR) and in the private herbarium of L. Shuka.

Results and discussion

Scorzonera lafranchisiana Kit Tan & G. Vold (Figs. 1–3)

On the first day of his stay at Sarandoporos in south-east Albania (3 July 1896) and 15 days later on Mt Smolikas (N Pindos, Greece), Baldacci collected plants from both localities to which the same name was given, viz., *Scorzonera doriae* Degen & Bald. Tan & Vold (2019) lectotypified the name with the high altitude Mt Smolikas plants and described plants from the confluence of the Aoös and Voidomatis rivers in N Pindos as a new species, *S. lafranchisiana* Kit Tan & G. Vold. As well as at the Aoös and Voidomatis rivers, this species occurs on ‘islands’ in the Sarandoporos River in north-west Greece and southeast Albania (Fig. 2).

Recent material seen

SE Albania. Korça district, Kolonja Municipality: Leskovik, on the ‘islands’ formed by deposits of sand and gravel on the right side of the Sarandoporos River, *ca.* 140 m SW of the old thermal water baths (*ca.* 450 m from border with Greece), 392–395 m, 40°05′49.43″N, 20°40′2.29″E, 28 May 2024, D. Shuka s.n. (TIR); *loc. ibid.*, 27 August 2023, D. Shuka s.n. (herb. Shuka).

Greece. Nomos Ioanninon, Eparchia Konitsis: NW of Kavasila village, sandy alluvial soil on gravelly bed of Sarandoporos River, 405 m, 40°05′58.62″N, 20°40′56.54″E, 27 August 2023, D. Shuka obs.

The plants on the Albanian side are caespitose, with several stems some of which are 3–5 branched in the lower half. The leaves are lanate at base. The locality is the same as that of the first collection of *S. lafranchisiana* (sub nom. *S. doriae*) by Baldacci, “in saxosis alvei fl. (flume) Sarandaporos ad Vromonero, district Ljaskovik (Leskovik)”. This is *ca.* 9.5 km northeast of the confluence of the Aoös and Voidomatis rivers, the type locality for the species (Tan & Vold 2019). *Scorzonera lafranchisiana* was also observed in the Greek part of the Sarandoporos River (Fig. 2a).

Sarandoporos is located on the right side of the river or 730 m below Derveni Bridge. This bridge which had once connected the two riverbanks of Albania and Greece was blown up during the First World War



Fig. 1. *Scorzonera lafranchisiana* from Sarandoporos River, SE Albania: a, habit; b, capitulum; c, achenes.



Fig. 2. Sarandoporos River: a, Greek side; b, Albanian side ('islands' indicated by arrows).



Fig. 3. Sarandoporos River: a, canyon; b, the destroyed bridge.

(1914–1918) and never restored. Only the foot wall remains (Fig. 3b). Baldacci must have crossed over from the Albanian to the Greek side via the bridge (Fig. 3a). The Albanian territory is also called Vromonero (bad water) because of the sulphurous smell from the thermal waters emerging from a large underground cave which lies in both Albanian and Greek territory.

Habitat and Ecology

The riverbed on both sides of the bridge widens from 300 to 850 m, enclosing several small sparsely vegetated islands. The sandy patches between the stones of the riverbed are ideal for the luxuriant growth and spread of *S. lafranchisiana* (Fig. 1a). *Salvia candidissima*, *Tamarix* spp., *Chondrilla juncea*, *Lythrum salicaria*, *Sporobolus* sp., *Tribulus terrestris*, *Salix purpurea* and *Populus nigra* were recorded on the riverbed.

The shrub vegetation on the riverbanks and slopes comprises *Arbutus andrachne*, *Cercis siliquastrum*, *Colutea arborescens*, *Cotinus coggygria*, *Juniperus deltoides*, *Fraxinus ornus*, *Phillyrea latifolia*, *Pistacia terebinthus*, *Quercus coccifera*, *Quercus ilex*, *Rubus* spp., *Rosa canina* with *Alkanna pindicola*, *Carlina corymbosa*, *Cistus incanus* and *Psoralea bituminosa* in openings.

The rocky limestone slopes and crevices are home to species such as *Athamanta macedonica* subsp. *albanica*, *Silene cephalenia* subsp. *epirotica*, *Ramonda serbica*, *Euphorbia characias* subsp. *wulfenii*, *Iris germanica*, *Carlina corymbosa*, *Asparagus acutifolius*, *Ephedra foeminea*, *Prunus webbii*, etc.

Flowering period: May to early June.

Athamanta densa Boiss. & Orph. (Figs. 4 & 5)

Athamanta densa was described from Mt Parnassos in Sterea Ellas, Greece and also occurs on Mt Olympus in North Central Greece. The species was reported in Albania based on a collection “in rupestribus alpinis m. Çika (Acroceraunia), versus distr. Delvino, ca. 1700 m, 1 August 1894, Baldacci 131”. Degen in litt. (Baldacci 1896) had provided the following statement “A planta Graeca indumento foliorum parciore differt; foliis pilosis tamen et la-

ciniis elongatis ab *A. haynaldii* Borbás et Uechtritz longius distat. – Folia plantae parnassicae (leg. Guicciardi) duplo latiores sunt: plantam albanicam itaque sub nomine var. *albanica* Deg. In herbario inseravi” [translation: It differs from the Greek plant in the appearance of its leaves; however, it is more distant from *A. haynaldii* Borbas & Uechtritz in its hairy leaves and elongate laciniae. – The leaves of the Parnassica plant (leg. Guicciardi) are twice as wide: therefore the Albanian plant to be named var. *albanica* Deg. I place it in the herbarium”].

From this we know that specimen *Baldacci* 131 exists. However, *A. densa* has never been found on Mt Çika in district Delvino (currently Himara). All reports on its presence in Albania (Tutin & al. 1968; Demiri 1983; Strid 1986; Qosja & al. 1992; Vangjeli & al. 1995; Vangjeli 2003, 2015; Barina 2017; Barina & al. 2018) were based on Baldacci (1896) except the recent mention by Pils (2024) who cited the occurrence of this species from “the rather inaccessible E-flank of Mt Nemërçka” based on two collections by M. Duchoň (BRNU).

Our efforts to find *A. densa* following the route of Baldacci on Mt Çika on 1 August 1894 at altitudes between 1500–2000 m were unsuccessful. However, we observed all other taxa listed by him such as *Hieracium naegelianum*, *Danthoniastrum neumayerianum*, *Saxifraga taygetea*, *S. spruneri*, *Geranium macrorrhizum*, *Ranunculus sartorianus*, *Rhamnus fallax*, *Achillea abrotanoides*, *Senecio nebrodensis*, *Anthemis cinerea*, *Carum meoides* as well as *Aesculus hippocastanum* (Baldacci 1917). In crevices of steep rocky limestone slopes at altitudes of ca. 1700 m we found only *Athamanta turbith* (L.) Brot. (Fig. 4), *Lactuca intricata*, *Hypericum haplophyllodes*, *Arenaria cretica*, *Minuartia stellata* subsp. *pseudosaxifraga*, *Sideritis raeseri*, *Prunus prostrata*, *Sesleria albanica*, *Viola acrocerauniensis*, etc. (Shuka & al. 2011).

At our request, the material of *A. densa* collected by Duchoň from Mt Nemërçka and deposited in BRNU (Duchoň 204 and 208) was examined by J. Danihelka, curator at BRNU. They were identified as *Cnidium silaifolium* and *A. turbith* respectively. *Baldacci* 131 from Mt Çika was located at WU (Fig. 5)



Fig. 4. *Athamanta turbith* from Mt Çika, S Albania.



Fig. 5. *Athamanta turbith* from Mt Çika, S Albania (Baldacci 131, WU).

with the kind help of Dieter Reich and identified as *A. turbith*. Thus we can safely conclude that *A. densa* does not occur in Albania but is a Greek endemic.

Specimens of '*A. densa*' seen from Albania

Mt Çika, district Delvino, “in rupestribus alpinis M. Çika (Acroceraunia), ca. 1700 m, 1 August 1894, Baldacci 131 (WU!) det. as *Athamanta turbith* (L.) Brot. by Dieter Reich & Kit Tan in November 2024.

Albania, district Gjirokaštër, Mt Nemërçkë, SE part of a ridge close to border with Greece, limestone scree, 1803 m, 5 July 2013, 40°05'06"N, 20°27'47"E, Mario Duchoň 204 (BRNU 661659), det. as *Cnidium silaifolium* by J. Danihelka in 2024.

Albania, district Gjirokaštër, Mt Nemërçkë, central part, highest peak around Mt. Papingut, dolomite rock, crevices, 2035 m, 2 July 2013, 40°08'22"N, 20°24'38"E, Mario Duchoň 208 (BRNU 661663) det. as *Athamanta turbith* (L.) Brot. subsp. *haynaldii* Borbás & R.Uechtr. by J. Danihelka in 2024.

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