

Orchids of Romania – Part 1

Nora De Angelli tells the story of a book, a project, and a lifetime dedication (photos by Nora De Angelli)

Romania is a beautiful country located at the crossroads of Central, East and Southeast Europe. It is roughly the same size as the United Kingdom. Its geography is very varied, with six types of terrain – large beaches and sand dunes on the shores of the Black Sea; the steppe lands of the Dobrogean Plateau (which stretch as far as the Caucasus and western Kazakhstan); vast plains; sub-alpine hills; and the Carpathian Mountains. The last sustains one of the largest areas of undisturbed forest in Europe and is home to about 60% of the European brown bear population. Romania has a temperate continental climate with four distinct seasons, characterised by hot summers and cold winters, with intermediate springs and autumns.

Needless to say, a country with such diverse terrain constitutes a biodiversity paradise. After years of study abroad, I returned to Romania to help my father complete a small project on the wild orchids of the Bucegi Mountains Natural Park, which surrounds Sinaia, my birthplace. I found that orchids were growing everywhere, not only in my father's "little corner of paradise", the Natural Park.

Orchids of Romania Project

That is how the project Orchids of Romania started, spanning four years and becoming an obsessive hunt for wild orchids. By the autumn of 2020, we were finally able to conclude that in Romania, orchids are represented by three subfamilies and 26 genera and comprise



Bucegi Mountains Natural Park, a haven for species of *Nigritella*, is vulnerable as the area, once remote, is now easily reached by car

approximately 71 species, 14 subspecies, 48–49 varieties, subvarieties and forms, six intrageneric hybrids and one intergeneric hybrid, new to science. [Editor's note: not all the subspecies, varieties and forms are recognised by Kew]. We are also currently studying seven newly discovered species and five subspecies, which are waiting to be confirmed in the near future. The species list remains open in the hope that new discoveries will be made each year.

To give you a brief picture of the orchid richness of this country, I will present a few species, some endemic to Romania or very rare, others spectacular or newly discovered.

Bucegi Mountains Natural Park

This is situated in the centre of Romania, in Prahova county. The highest point is approximately 2,200m, and the climate is cool, alpine continental, with chilly summers and long winters. Nevertheless, when spring arrives, the place transforms itself into a floral paradise.

The park is home to the famous vanilla orchids, *Nigritella* – *austriaca*, *miniata*, *bicolor*, *rhellicani* and two newly-discovered species– that cover the high alpine plains in June and July.

In mid-June, at lower altitudes (sub-alpine, about 800–1,200m), deep in the humid, dark mixed forests, large populations of the enigmatic ghost orchid, *Epipogium aphyllum*, can be found growing in abundance, mimicking to perfection the bed of dead leaves that cover the forest floor.

Other spectacular species found in the park are *Ophrys insectifera* and *Oph. scolopax* subsp. *cornuta*.



Nigritella rhellicani in its natural habitat



A group of *Epipogium aphyllum* in Bucegi Mountains Natural Park



A flower of *Epipogium aphyllum* being visited by a hoverfly, *Episyrphus balteatus*



Ophrys insectifera in Bucegi Mountains Natural Park

Another surprising species found in Prahova county is the beautiful *Cypripedium calceolus*. A rare, double-headed form in which the inflorescence has two large flowers, belongs to a unique, isolated population of about 40–45 individuals, and has been under my father's careful observation over the last 50 years. The location is completely unknown to the public and this has helped the plants survive undisturbed and produce beautiful flowers each year, at the beginning of May.

Rodnei Mountains National Park

Another magical place where the lady's slipper orchid forms populations of hundreds of individuals is in Rodnei Mountains National Park, situated in the north of Moldavia, the most easterly historical region of Romania. In the summer of 2019, we were lucky to find



Ophrys scolopax subsp. *cornuta* also occurs in Bucegi Mountains Natural Park





Cypripedium calceolus in Rodnei Mountains Natural Park



This plant of *Cypripedium calceolus* var. *citrinum* was uprooted and stolen the year after the photo was taken

the rare *Cyp. calceolus* var. *citrinum*, in which the sepals and lateral petals are completely yellow like the lip, due to a total lack of anthocyanin pigments, so that the flowers appear entirely yellow. In Romania, this was the only specimen known to have ever flowered in the wild, but in the spring of 2020 this unique plant was uprooted and stolen. The thief was never caught.

Iron Gates Natural Park

Now, it is time to travel further south for a change of landscape. The southern parts of the country, which stretch along the mighty river Danube (Europe's second-longest river, after the Volga, flowing 1,788 miles from its source in Germany's Black Forest to the Black Sea), present particular distinct, regional climate variability.

Southwestern Romania is characterised by a typically Mediterranean climate, significantly milder and far more humid than in the rest of the country. This is where the Danube first meets Romania and forms the longest and most spectacular gorges in Europe, by separating the southern Carpathians from the Balkan Mountains. This amazing region is called the Iron Gates Natural Park and is located on the banks of the Danube, on the border between Serbia and Romania.

The park is an orchid paradise with dozens of species – some found only in this region – such as the beautiful *Anacamptis papilionacea* and its hybrid with *Ant. morio*, *Ant. x nicodemii*, both of which form large populations in different parts of the park. The self-pollinating *Ophrys apifera* is also frequently found there.



Iron Gates Natural Park



A white form of *Anacamptis morio*



Flowers of *Anacamptis x nicodemi* form a resting place for the rare butterfly *Parnassius mnemosyne*



Inflorescence of *Anacamptis x olida* nothosubsp. *paparistoi*



While undertaking research in the park in 2017, we were fortunate to find in one remote location, a single individual of the exceptional *Ant. x olida* nothosubsp. *paparistoi*, a hybrid between *Ant. coriophora* and *Ant. morio* subsp. *caucasica*, both abundant in this region.

Dobrogea (Dobruja) Plateau – The Babadag Forest Nature Reserve

At the eastern limit of Romania, we reach the Dobrogea (Dobruja) Plateau. The climate here is warmer and drier (even arid) than the rest of the country and as such, the flora of this region, comprising some Mediterranean species, is very special.

One of the best orchid sites in Dobrogea is the Babadag Forest Nature Reserve. Despite the scorching summer temperatures (which may reach 40–43°C), the forest is surprisingly rich in orchids. The most spectacular and imposing of all is without



A strongly coloured specimen of *Himantoglossum calcaratum* subsp. *jankae*



Anacamptis pyramidalis in the Babadag Forest Natural Reserve

Anacamptis papilionacea visited by the grasshopper
Isophya speciosa



Limodorum abortivum, commonly known as violet limodore

a doubt *Himantoglossum calcaratum* subsp. *jankae*, occasionally growing to 1m in height. It flowers in July and attracts its pollinators with its sometimes unpleasant scent.

Other more representative species include *Anacamptis pyramidalis* and the abundant *Orchis purpurea*, both presenting wide chromatic diversity. The rare white variety, *O. purpurea* f. *albiflora*, can be encountered here. Also, at the beginning of May, the beautiful violet limodore, *Limodorum abortivum*, appears in the shady forest margins.

Nora De Angelli graduated in Molecular Biology from the University of Bucharest and has subsequently studied for further degrees in the Netherlands and London. She is now working for a PhD in Orchidology at the University of Agriculture and Veterinary Medicine in Bucharest.



Orchis purpurea in the Babadag Forest Natural Reserve

Meeting programme

*All talks will be online via Zoom (email newsletters will include link and password)
Meetings start at 11.00 (members can join from 10.30) unless otherwise stated*

2021

1 May

Meeting ID: 973 0006 2676

password: 615243

***Paphiopedilum* in China**, presented from China by **Wenqing Perner**. She runs Hengduan Mountain Biotechnology Ltd, which is involved in micropropagation in China, and conservation work on Chinese *Cypripedium*.

5 June

Meeting ID: 933 0038 2373

password: 615243

Please note that this will take place at 14.30, UK time
Catasetums, presented from America by **Fred Clarke**. He is recognised as one of the foremost breeders of this genus.

3 July

Meeting ID: 981 4081 6548

password: 615243

Building and maintaining orchids in a terrarium, by **Diana Petrokaite**

Meeting ID: 949 1770 8847

Password: 615243

12:15 Annual General Meeting

Following Diana's presentation, all OSGB members are asked to remain online for the AGM

7 August

Meeting ID: 919 5315 1295

Password: 615243

Little Orchids *title yet to be confirmed* by **Helen Milner**. Following on from the previous month's talk, Helen, who has won many RHS gold medals for her small displays, will highlight some key treasures for you to grow.

4 September

Meeting ID: 93300382373

Password: 615243

Please note that this will take place at 14.30, UK time
Orchids of the Rio Negro, Brazil, presented from America by **Mary Gerritsen**, author of many orchid books and an incredible orchid grower based in the San Francisco Bay area. Mary has taken part in Orchid Conservation Alliance trips over the last few years.



Iron Gates Natural Park in Romania (photo by Nora De Angellis)

