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Nora de Angelli : Romania's Wild Orchids

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by [Yvette Depaepe](#)

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Currently, [Nora de Angelli](#) is studying for a PhD in Orchidology at the University of Agriculture and Veterinary Medicine of Bucharest, Romania. The subject of her thesis concerns the detailed morphological study of Romanian wild orchids, their habitats, protection and methods of conservation. Let's listen to what Nora reveals us behind her passion for those amazing flowers.



'Orchids of Romania'

I was born in Sinaia, Romania, to parents Nicole Anghelescu (an engineer and business woman) and Dan Anghelescu (an engineer, photographer and author). Sinaia is a beautiful touristic resort, surrounded by mountains and situated right next to one of the largest natural protected areas of Romania, the Bucegi Mountains Natural Park. It was in this wonderful corner of paradise where I learned, from early childhood, how to understand and appreciate the magic of the mountains and the beauty of nature. During our long trips to the mountains, my parents carefully introduced me to the hidden world of the colourful, wild flowers, which grow in abundance in the depths of the dark forests or cover the vast alpine plains.

Needless to say, that I my first (and only) choice regarding my career was that of becoming a biologist. That being so, I graduated Molecular Biology at the University of Bucharest and then I continued my studies for a higher degree (PhD) in the Netherlands. Later, I moved to London, my second home, where I continued my scientific career at the University College London and the Imperial College, as a research scientist. In 2011, I graduated with an MA in Documentary Film from the University of the Arts, London College of Communication, becoming a freelance documentary film producer and photographer.

My interest in photography and film led me to travel around the world across five continents, from the Fiji Islands of the South Pacific, to East Africa (Kenia, Tanzania and Zanzibar), North and South America (US, Argentina, Chile), Asia (South Korea, Nepal, Tibet, Sri Lanka, the Maldives) and to the Middle East (Israel and Jordan).

As a passionate traveller I reached the base camps of Mt Fitz Roy (Argentina/Chile), Mt Kilimanjaro (Tanzania) and Mt Everest (Nepal/China), in three consecutive years. My ethnographic searches for different cultures, societies and traditions have led me into collecting series of images with a highly engaging documentary value.

In my spare time, I love to dance Argentinean Tango, a dance which I learned and later taught in London. And, since I have been practising alpine ski from a very young age, during the long winters, I love to go for a vacation and for some serious skiing with my family in Colorado, US.

When did you start photographing orchids, Nora?

It was down to a providential/fortunate turn of fate, that I happened to come to study ... wild orchids. I was just finalizing a film project in London, when my father contacted me and suggested I should temporarily return to Romania and help him complete a small project on the wild orchids of Bucegi Mountains Natural Park, a protected reserve/area, surrounding Sinaia, my birthplace.

And thus, intrigued by the subject matter, in the summer of 2017, I took (what at the time, I thought to be only) a short break from the hectic London life, and returned to Romania, to briefly photograph and study some ... wild orchids!

How has the Project Orchids of Romania started?

For those of you who have never been to Romania, I should give you a brief description.



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Romania is a beautiful country located at the crossroads of Central, Eastern and South-eastern Europe. Others, like Emil Cioran, the French writer of Romanian origin, consider it to be located 'at the gates of the Orient', somewhere at the crossroads between Europe and Asia.

Romania is roughly the same size as the United Kingdom, which makes it the largest country in South-eastern Europe. Its geography is very varied, being characterised by six different types of terrain, such as the large beaches and sand dunes found on the shores of the Black Sea, the steppe lands of the Dobrogean Plateau (which stretch as far as the steppes of Caucasus and western Kazakhstan), vast plains, subalpine hills and steep, rocky mountains - the Carpathians. The Carpathians sustain one of the largest areas of undisturbed forests in Europe, which are home to one of the largest European brown bear populations (approximately 60% of European brown bear populations live in the Carpathian Mountains). As a consequence of its position on the continent, Romania is considered to have a temperate, continental climate, with four distinct seasons, mainly characterised by hot summers and cold winters, with intermediate springs and autumns.

Needless to mention that a country with such a diverse natural heritage constitutes a biodiversity paradise. Thus, shortly after I arrived, I started my thorough research on orchids, their habitat and distribution. To my surprise, I found out that orchids were actually growing everywhere, not only in my father's little corner of paradise, the Bucegi Mountains Natural Park. Consequently, I realised that his initial, small-scale project had a lot more potential and needed to be largely broadened/expanded.

And this is how the project Orchids of Romania started, a project that spanned over a period of four years and which became an obsessive hunt for wild Romanian orchids. It materialized in tens of thousands of kilometres travelled across Romania, countless sleepless nights, physically challenging hiking and mountain trekking trips, thousands of hours of filming and photographing, spent in scorching heat or torrential rains, all the way from the chilly, rocky peaks of the Carpathians to the warm, Mediterranean-like climate of the Iron Gate Gorges in the south, where the Danube river enters the country, or from the dry hills of Dobrogea, to the rainy Transylvanian plateau. These sessions eventually took place after days of searches for the needle in the haystack, as we used to call the unique orchid specimens. Hidden either within the lush vegetation of dangerous swamps inhabited by biting insects, snakes and other reptiles, or lost in the deepest, darkest, wild forests.

How many species of orchids have you found and photographed since 2017?

By the autumn of 2020, we were finally able to conclude that in Romania, orchids are represented by 3 subfamilies and 26 genera, which comprise approximately 71 species, 14 subspecies, 48-49 varieties, sub varieties and forms, 6 intra generic hybrids and 1 inter generic hybrid, new to science. Apart from those mentioned above, we currently have under study 7 newly discovered species and 5 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.



'Cypripedium calceolus'



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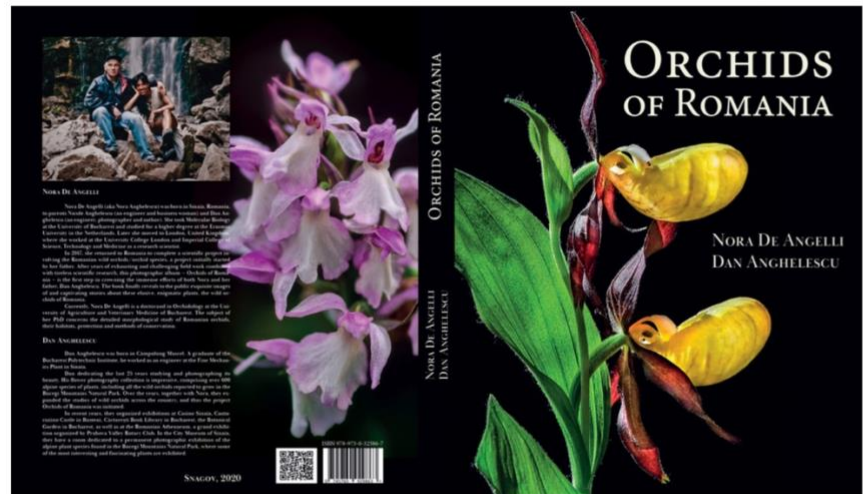
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Tell us about your first published book 'Orchids of Romania', Nora.

After years of exhausting and challenging field work combined with tireless scientific research, the project was completed and the photographic album, Orchids of Romania, was finally published in October 2020. Orchids of Romania is the first monograph that covers all Romanian species of wild orchids, known to date and reveals to the public a complete collection of images and captivating mimicry stories about these elusive, enigmatic plants.





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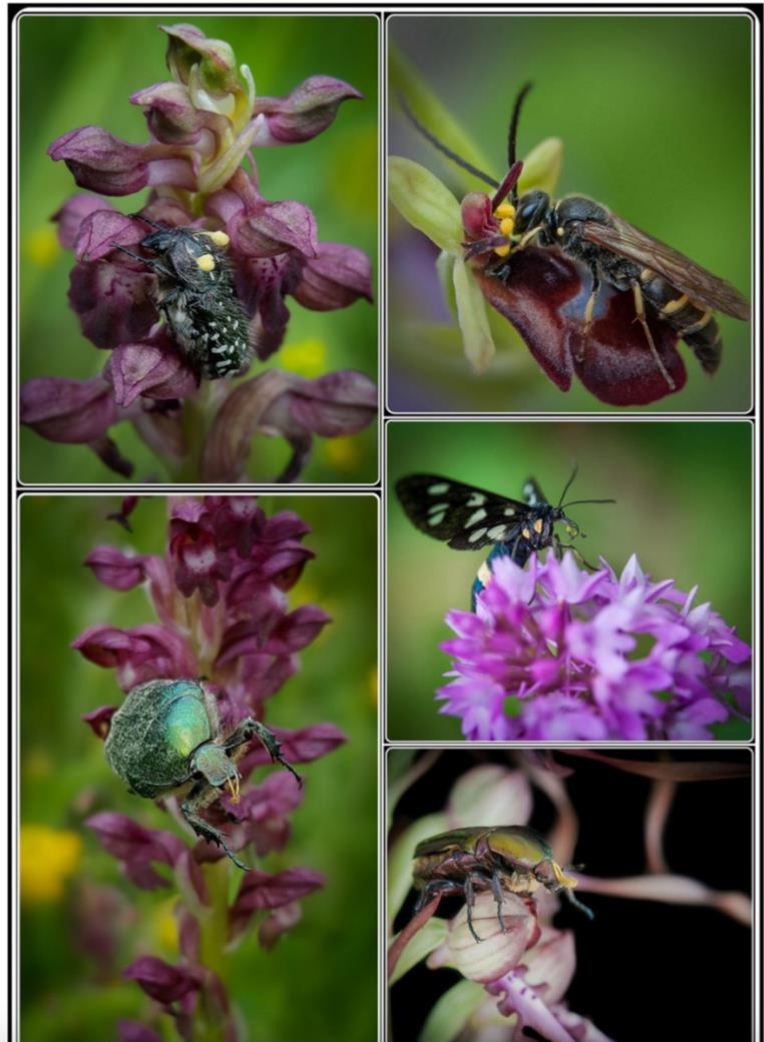
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Orchids of Romania is written in English, in order to 'put Romania on the map' or better said, 'to put Romania on the international map of Orchidology', and ultimately show the richness of orchid species of this country. In this fashion, Orchids of Romania can be regarded as an active ambassador of our larger biodiversity project, intended to protect and conserve Romanian wild orchids, which, in the same time, are part of the universal natural heritage.

Describe your overall photographic vision when photographing orchids.

In truth, before 2017 when the project Orchids of Romania started, I had never ever taken macro photography seriously. At the time, I was more of a journalist, using completely different techniques and ways/modes/manners of 'looking at a subject' (photographing a subject). Even now, I remember that my first macro images of orchids were quite dreadful, actually ... scary dreadful! Macro photography was a completely different game to me and it took a few hundred shots before I started to grasp its important points. Probably more than other types of photography, macro photography demands total perfection. The fact that a small subject is magnified many times its size, involves a great deal of perfection in details, compositions, colours, lights. I always said that macro photography is a bit like exact science.

At the end of the day, in order to use the images taken in the field for your research or publications (books, websites, articles, etc.), the following conditions should be met, all at once: the flowers should look perfect (they have to be at the top of their anthesis or at the peak of flowering), the pollinating insects (if you are lucky to catch any on the flowers) should be caught in perfect focus and position on the flowers, the depth of field should be the highest possible in the given circumstances, the light should be perfect, (not too dim and not too strong to overexpose your image), the composition should be best to show the flowers, the behaviour of the insects and, if possible parts of the natural habitat (the environment) of the orchid.





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'Anacamptis'

As mentioned above, I also love to include detailed studies of insects that visit and, often, pollinate the orchids. Photographing insects makes your life even more complicated, since they detect movements (and also lights and shadows) very rapidly and quite often give you no chance to catch them in action, pollinating the flowers. Consequently, 'orchids and insects' represent a more advanced step in macro photography and, in order to master it, I needed lots of practice. Thus, when I started to involve various insect behavioural studies in my orchid macro photography work, I had to switch from a slow way of macro photographing to a much faster and precise manner of 'pointing and shooting'. Nevertheless, once you emerge yourself into the moment, with your body absolutely still and the lens slowly focusing on the naïve, little orchid guests, the photos are almost guaranteed to come out beautifully. In conclusion, photographing orchids is in itself an adventure and a gradual discovery of all those unseen and unknown mysteries of these enigmatic plants.

What is more important to you, the mood/story behind your images or the technical perfection?
Everything is important to me - the mood, the story and the technical perfection.

Usually, the mood is given by the surroundings or what we call the natural habitats. Orchid habitats are very varied and this is particularly important for my photography. For example, some species grow in sunny meadows, in full sunlight, which gives a happy, light mood in most of the images. Usually, these orchids are very tall and showy and have large, vividly coloured inflorescences which attract lots of beautifully coloured butterflies, bees or shiny iridescent, bluish-green bugs. Examples are – *Dactylorhiza sambucina*, *Dactylorhiza maculata*, *Orchis purpurata*, *Orchis simia*. In this case, the images are bright and colourful giving you a very uplifting, happy feeling.



'Himantoglossum calcaratum'



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On the other extreme are the orchids which grow in the wilderness of the darkest forests or hidden inside the deepest, misty swamps. These orchids are rather inconspicuous and very hard to detect on the barren forest floors, covered in beds of dead leaves. These dark-loving species are smaller and some lack, almost entirely, any green leaves. The flowering stems (the only parts seen above-ground) are brownish or yellowish-green and their flowers are usually colourless, whitish-green, translucent. Such examples are genera such as *Epipogium*, *Corallorhiza*, *Liparis*, *Malaxis*. As a result, the entire mood is overwhelmingly different. The photos are dimmer, darker, contrasty and carry a mysterious, heavy silence with them.



'*Corallorhiza trifida*'



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In most cases, the mood of an image adds a lot to its story, even if we talk about macro photography. In this type of photography, it is slightly harder to tell a story than in, for example, portrait photography, in which the eyes or the entire expression of a face tells immediately a whole, emotional story. Nevertheless, macro subjects aren't short of tales. Quite often though, I realised that only by getting that close to an orchid flower, I could finally understand its true story. For example, any imperfections or missing parts of a petal or of a leaf may tell you that the orchid was visited and devoured by a caterpillar or a phytophagous beetle, which fed on them greedily.

Other times, I found, hidden inside the inflorescence, small spiders, perfectly camouflaged for the insects' eyes/vision. They are temporary residents of the orchid and exploit its flowers by using them as magnets for little insects such as bees or butterflies, on which they pray.



'Cypripedium calceolus flower'

Thus, the minute details reveal the secret stories of macro photos of orchids and this is of a paramount importance since you need extra attention and inquisitive mind to fully understand them. All these stories about mimicry, camouflage, deceit in orchids are described in detail in my book, *Orchids of Romania*.



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'Himantoglossum cacaratum'

And of course, a photo with a great story and a great mood requires exquisite technique. In conclusion, I am afraid that none from the above should be missing from one's workflow, since they all go hand in hand in producing a great image.

What generally is your relationship to your subject matter beyond being an observer?

I relate very differently to my subjects, but, this time, I will refer exclusively to orchids. When I first started photographing orchids, I was a simple observer, enjoying their intricate flower shapes and beautiful colours. However, the more I got to know them, the more surprising they proved to be. My simple way of photographing them gradually changed into a much more complex, almost scientific way of really seeing/understanding what was beyond my eyes, beyond my very basic senses.

For example, approximately one-third of orchids offer no floral rewards to their pollinators. The majority of these non-rewarding species exploit the food-foraging behaviour of their pollinators and attract them by deceit, using various ingenious visual and olfactory stimuli. The pollinating insects land on the main, large central petal, known as the labellum. At the beginning, I was tempted to say that the translucent white surface of the labellum is simply spread with a few purple-pink patches that probably have the role of simply embellishing the flower. However, when I looked closely, I realised that the purple patches are actually composed of highly pigmented tufts of fine hairs, known as the papillae. It is likely that labellar papillae, which often produce various, distinct floral secretions, attract and guide visiting insects into the flower (by means of olfactory, visual and tactile stimuli), playing an important role in facilitating pollination. In many reward less genera such as *Anacamptis*, *Himantoglossum*, *Orchis*, the pigmented papillar tufts create false nectar guides that provide a good hold for visiting insects, orientating them toward the anther, found in the centre of the flower where the nectar was supposed to be secreted.



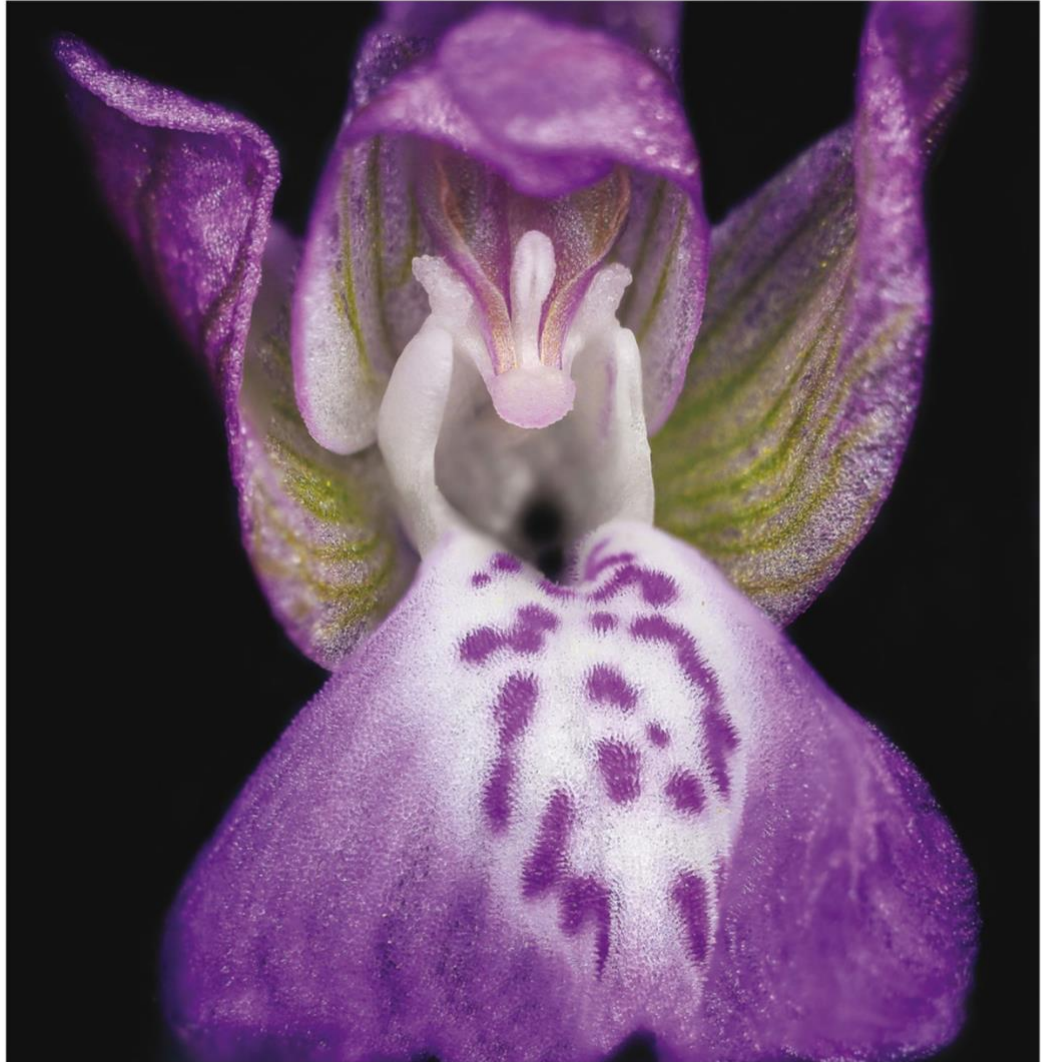
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'Orchis militaris'



'Anacamptis morio'

Other species, like those of the genus *Cephalanthera*, present a yellow patch on their labellum. To the naked eye, the brightly white flowers seem to have an egg yolk spread on the tip of the labellum. However, after using some ultra-macro photography techniques, I discovered that the egg yolk was composed of hundreds of thin, yellow hairs (elongated papillae) which actually mimic the real pollen. The insects, always hungry and in search of food, mistake this pseudo-pollen (false pollen) for the yellow grains of true, nutritious pollen and land on the flowers deceived by the presence of food. While chewing the yellow hairs, quite often they successfully pollinate the flowers. Mission accomplished for the smart, deceiving orchids!



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'Cephalanthera longifolia'

These are only a few examples that show how my approach and my relationship to photographing orchids has changed, ever since I started to seriously involve myself into studying these plants. From a simple observer, I inevitably turned into an addicted admirer with an enthusiasm, not only for their overall beauty, but also for their best kept secrets.

Describe your favourite photograph or your favourite species/photograph and why it is special to you?

My favourite picture is that of *Ophrys insectifera* L. pollinated by pseudo-copulation by its only pollinator, the solitary wasp, *Argogorytes mystaceus*. I will explain why (you can also find the extended story in my book).

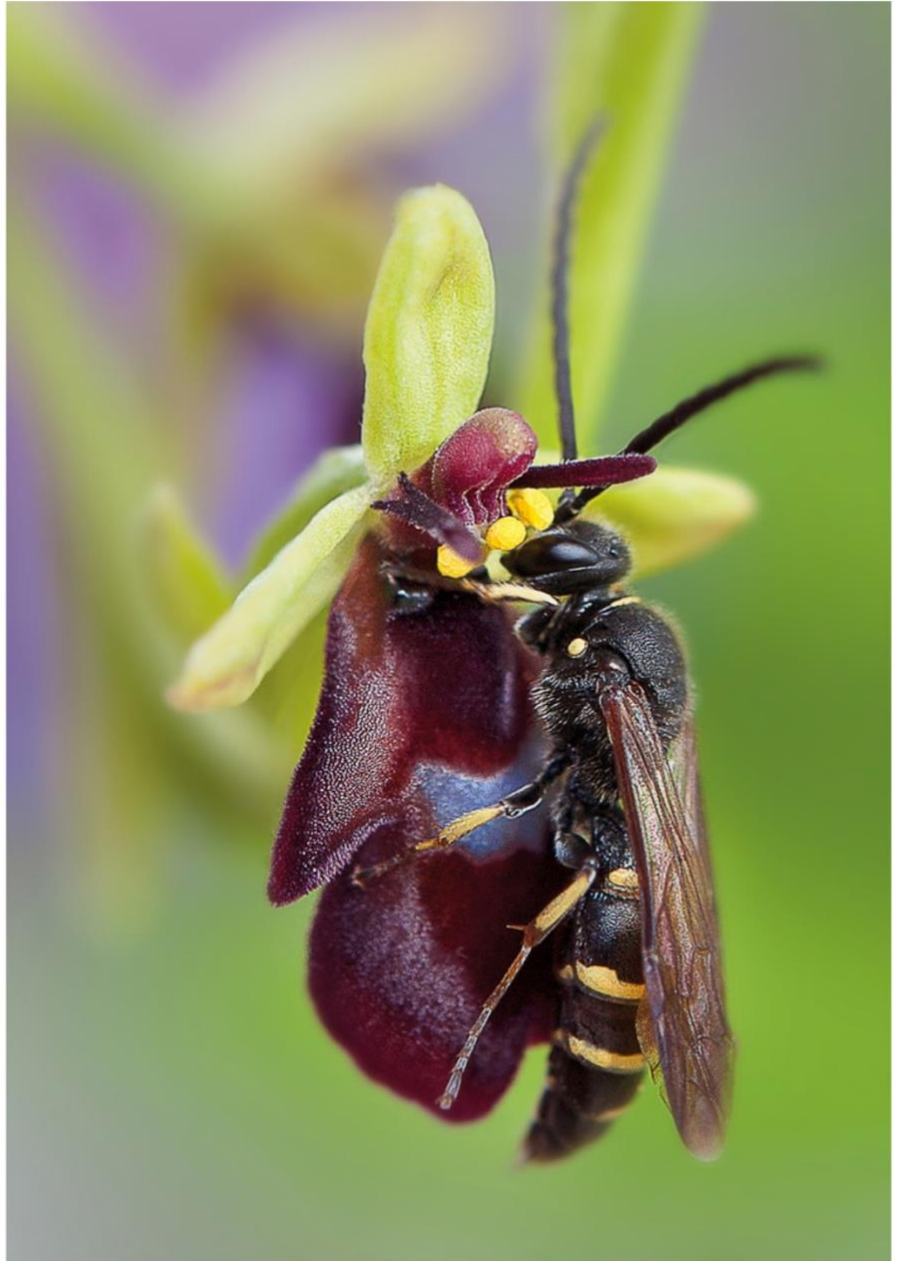


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species, known as Bee Orchids, are also non-rewarding orchids with nectarless flowers that do not offer any recompense to the insects. As a consequence, their pollination is based exclusively on deceit and mimicry, which, in this case, becomes one of the most sophisticated strategies in the Plant Kingdom, a strategy termed as sexual deceptive mimicry.



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'Ophrys insectifera'

Sexual deceptive mimicry is exclusive to orchids and is one of the most fascinating phenomena of the plant world. The resulting convergent resemblance among two, totally unrelated kingdoms, plants (Plantae) and animals (Animalia) – orchids and insects, is therefore absolutely staggering. Sexual deception in orchids occurs when the plant sends false sexual signals to the pollinator, tricking it into thinking that the flower is a female of its own kind, available for sex.

Sexual deceptive mimicry is a complex deceptive mechanism in which the orchid flowers undergo remarkable evolutionary, morphological changes in their structure and function, especially in that of the labellum, in order to achieve an almost perfect mimicry of the signals used by insect females during mating time.



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for sex.
Sexual deceptive mimicry is a complex deceptive mechanism in which the orchid flowers undergo remarkable evolutionary, morphological changes in their structure and function, especially in that of the labellum, in order to achieve an almost perfect mimicry of the signals used by insect females during mating time. Sexually deceptive orchids mimic the female insects of various species of bees, wasps and flies. Attracted from a distance by the orchid's pseudo-pheromones, the male approaches and gets seduced by the orchid's resemblance to a female wasp. The female seems to have her head stuck inside a flower and her back turned towards him. The colour and size of the body match perfectly his expectations. The iridescent/metallic-blue patch on her back resembles her folded wings. Very tempted, he lands on the flower and tries to copulate with the pseudo-female. During pseudo-copulation, the males reach high levels of stimulation on the orchid flowers, rubbing their bodies against areas on the flower labellum where the density of hairs presumably adds to the initial olfactory stimulation. After several unsuccessful attempts to mate, the male bee usually take flight, often with the pollinia firmly attached to its head. The pollinia will pollinate a subsequent flower, during another romantic attempt.

Some scientists believe that, from an evolutionary point, sexual deception may actually help the male insects' brains evolve. But after all I have learned about orchids, I rhetorically wonder if this will be enough for the poor bees to win over the devilish orchids, or if the orchids will not become in turn, even better deceptive, maleficent lovers?

Do you prepare carefully the locations where you are intending to photograph?
To be honest, I do not prepare at all, the locations where I intend to photograph. Photographing wild orchids is a very dynamic, spontaneous process and it takes place in the most unexpected natural habitats. None of the plants can be photographed in a studio or within a man-made environment. On the day of the shoot, I mostly try to make the best use of the given weather conditions. Weather is one of the most important and the most uncontrollable factors that influences your work, out there in the field. To get a good photo, you need good light and good light implies (pretty) good weather. When that is not the case, I take the chances and shoot in the rain/storm. For example, the image below was shot in a torrential rain, in the middle of a swampy area. My camera and lenses were covered in water, I was soaking wet and the wind was so strong, I could hardly keep my eyes opened. Nevertheless, the wind stopped for a fraction of a second and I took the lucky shot. Later at home, I was rather pleased with the result.



'Ophrys oestrifera'



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'*Ophrys oestrifera*'

Not being able to carefully prepare my locations, adds the surprise factor since the same location may look completely different from one day to another and the images may come out beautiful and diverse, even if they were taken on the same spot.

What gear do you use (camera, lenses, bag)?

I have been using Nikon ever since I started photography. I am a creature of habit, very resistant to change so I believe I will continue to use Nikon cameras and lenses. I love the D3 series and of course, the newer model D850, especially because it makes it a lot easier for me to do focus stacking images (by using the amazing Focus Shift Feature).

For macro photography I use different macro lenses, such as Nikon Micro NIKKOR 60mm & Nikon Micro-NIKKOR 105mm, rarely Venus Optics Laowa 100mm, 2X Ultra Macro. I very much enjoy including some of the orchids' environment in the images and Venus Laowa Wide Angle 1:1 Macro Lens gives me the desired effect and composition. For ultra-macro photography, I use a Canon 5D Mark III body and Canon MP-E 65mm 1-5x Macro Lens. In case of doing Automated Focus Bracketing in Continuous shooting high (Ch) or Live view mode (Lv), at 9 frames per second (fps) in Fx-format sensor (full frame/format - 36x24mm) or 11 frames per second (fps) in Dx- format sensor (cropped format - 24x16mm), I use Helion FB tube.

Also, in some cases I have small and sturdy Manfrotto mini tripods with me, but I am fairly good at hand-holding my camera and, usually, the tripods do not get used very much.

What software do you use to process your images?

Since my macro images are mainly used for scientific or documentary purposes, I do not edit them extensively. I prefer natural colours and natural light, which give the real feel to an image. For brief retouching (cropping, sharpening, dust erasing), I mostly use Adobe Photoshop and Adobe Lightroom. Probably, the only major editing work is done on the backgrounds, which in my opinion, in macro photography, should always be blurred. Often, in the majority of images, the macro lenses do their magic on the depth of field and the backgrounds are almost 'perfect' straight out of the camera. Some orchids though, are very small and grow among dense grasses or in between dead, broken branches. These unavoidable 'neighbours' give the images rather messy, unphotogenic backgrounds, no matter how good your technique is, and distract the viewer's attention from the main subject. As a result, I spend a lot of time blurring and cleaning the backgrounds, until the images get improved.

For my focus stacking images I use Photoshop, Helicon Focus and Zerene Stacker. If your images/series of images are sharp and precise, the resulting/final image comes out perfectly, no matter what software you use.

Are there any specific directions that you would like to take your macro photography in the future or any specific goals that you wish to achieve?

I would very much like to continue to photograph wild orchids and their pollinating insects, and, of course, get better and better at it. There are so many aspects of orchid pollination still to be discovered and macro photography is such a powerful mean/tool to undergo such studies. In the same time, I would also like to continue my ultra-macro studies and reveal the hidden universe found inside the orchid flowers. Until now, this unexplored universe by humans was only known to the little insects, the orchids' pollinators. I am hoping to surprise and get surprised by my future discoveries and photographs of orchid flowers.

What do you think about 1X as a home base for your work?

1X is a wonderful platform and, as far as I know/as far as I am aware/to my knowledge/, it hosts some of the best photographers in the world. I have been an active member of 1X since 2011 and I was very pleased with this amazing community of fantastic photographers. Some of my images and tutorials were published on 1X, some were sold through the platform, others were submitted to 'Critique' or 'Contests'. Also, this year, I am particularly happy that my book, Orchids of Romania, the subject of this interview, will be published on 1X Blog and will be brought to the attention of this wonderful community.

As a member, you are actually spoiled for choice, the platform containing about 20 different categories (e.g. Abstract, Action, Animals, Architecture, Creative edit, Documentary, Fine Art, Landscape, Macro, Mood, Night, Portrait, Street, Underwater, Wildlife, and many others). It is virtually impossible not to find one or more categories that suit you / where your type of photography fits best/ and start sharing your images with the world. The site is truly inspirational and the photographs published are simply breath-taking. Thanks to the 1X members, my photography changed tremendously, over time. There is so much one can learn simply by analysing the images they publish or by reading carefully the 'Forums', the 'Tutorials' or the 'Magazine'.

I will definitely continue to be an active member of 1X and learn from the best. I advise everyone who would like to see their techniques (in any type of photography) improve fast, become a part of this dynamic community.

I am deeply grateful to Ms. Yvette Depaeppe, head of the 1x editorial team, for publishing/inviting me for this interview and for promoting and supporting the book, Orchids of Romania, on the 1X platform.

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