

natur musée

26.05
27.08 2023



TRICK OR TRUTH?

WILD ORCHIDS in
LUXEMBOURG



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de la Culture

FOREWORD

At first glance, they do indeed look deceptively real: as if they were a colourful collection of orchid flowers just removed from nature, displayed behind plexiglass for some eccentric reason. But there is nothing naturally fresh about these plants, nothing originally vegetal. Nor are they just behind transparent plastic, they themselves are made of synthetic material. They are lifelike plant models.

Is this now another sign of the feared triumph of the artificial over nature - at best a successful deception of the senses - since the plastic models shown in this exhibition do indeed seem more lifelike than the most carefully crafted Dutch still life?

This may well be what goes through the minds of some visitors of the 'natur musée' when they stand in front of the display cases with the unique creations made by plant modeller Sebastian Brandt. Should an exhibition about endangered wild orchid species not be about admiring them in their true naturalness?

However, ephemerality is part of the nature of all plant blossoms. Darkened museum halls are simply not suitable for exhibiting living plants over a longer period of time. Of course, this applies first and foremost to protected species, which include all of Luxembourg's wild orchids. Why attempts to breed wild orchids artificially for an exhibition would also fail is quickly explained by the biology of these plants: The obligatory symbiotic fungus, without which no native orchid can survive, cannot be co-transplanted from the plant's native soil.

Enough reasons, therefore, to present the wild orchids in this exhibition like insects frozen in time and amber. While in the past it was the artistic illustrations from herbal and identification books that helped to draw attention to inconspicuous and fleeting details, now it is Sebastian Brandt's ingenious imitations that stylise the colourful petals, the corolla conspicuously



enlarged to form a lip and the fleshy rhizomes of the plants into wonders of nature. Thanks to a generous donation, the National Museum of Natural History was able to acquire several specimens for its model collection to present to the public now.

But models are more than just artistic illustrative material. Ever since botanists commissioned botanical models from artisans in the 16th century, they have been considered "scientific models" to be used for botanical instruction at the highest level. Like the high-quality drawings found in identification books, the models are usually compositions of several specimens of the same species in order to capture the characteristic aspects of the plant by filtering out details that might hinder the identification of specimens in the field.

Complementing the exhibited herbarium specimens of wild orchids from the in-house collection and the panels created with the help of the Natural History Museum Erfurt, the exhibition "Trick or truth? Wild Orchids in Luxembourg" with its models thus offers a unique insight into the fascinating world of the "jewels of our nature". Let yourself be seduced by their beauty without restraint!

Patrick Michaely

Director

National Museum of Natural History – 'natur musée'



THANKS

The exhibition "Trick or truth - Wild orchids in Luxembourg" would not have been made possible without the support of several people. First, the many different departments of the National Museum of Natural History - natur musée - must be mentioned here, whose co-operation was indispensable for the creation of the exhibition. In particular, the staff of the museographic department, the educational department, the technical service, the botanical and zoological departments, as well as freelance scientific collaborators who have contributed their enthusiasm, diligence and expertise over the past few months to help create this exhibition.

Special thanks go to Sebastian Brandt (Reco-Brandt) as well as to the colleagues of the Natural History Museum in Erfurt, who provided us in advance with all the materials from their exhibition "Juwelen der Natur - Orchideen in Thüringen" and allowed us to adapt and redesign them for Luxembourg.

Many thanks to the numerous photographers who provided us with their pictures so that we could display the beauty of the native orchids in such a magnificent way: Sebastian Brandt, Guy Conrady, Nathalie Grotz, Jan Herr, Wolfgang Hock, Alain Hoffmann, Karel Kreutz, Yves Krippel, Max Lauff, Fernand Lommer, Marianne Majerus, Jean-Marie Mangen, Jim Meisch, Georges Moes, Mikka Mootz, Ronny Mozek, Simone Schneider, Eric Threinen, Jean-Paul Wolff, Peter Zschunke.

Many thanks to Georges Moes and the foundation natur&ëmwelt for their important contribution to the protection and conservation of orchids.

Finally, a big thank you to the museum attendants, guides and cleaning staff who make your visit to the exhibition a pleasant one.

INTRODUCTION

An important aim of the natur musée is to convey knowledge about the species found in Luxembourg, their way of life, their distribution and their conservation status. Unfortunately, plants are often neglected in this respect. Neither dried and pressed herbarium specimens nor faded specimens preserved in alcohol from the museum's collections are suited to showcase the diversity and beauty of the flora, let alone inspire enthusiasm. However, thanks to the latest preparation techniques, it is now possible for the first time to show plants in their full natural splendor - deceptively real!

In the exhibition "Trick or truth - Wild orchids in Luxembourg", the museum showcases its collection of lifelike replicas of the 45 native orchid species and gives an overview of the fascinating diversity of this plant family in Luxembourg.

Practically everyone knows about orchids. These popular houseplants with beautiful, strikingly colored flowers can be found in most flower shops and on many windowsills. Far fewer people are aware that orchids grow in the wild in Luxembourg. The wild orchids are particularly good indicators of natural, species-rich habitats that need to be protected and preserved amidst a global biodiversity crisis.

Native orchids have adapted to a variety of habitats. Some can survive in dark forest places with almost no light, others can tolerate the extreme drought and strong sunlight of dry grasslands, while yet others can survive in wet or even swampy meadows. One thing all orchid habitats have in common is that they are poor in nutrients and orchids are able to get by on very little. This is due to their close association with root fungi, on which they depend even during germination. In their underground storage organs, orchids can build up reserves that allow them to flower quickly at a favorable time.





TRICK OR TRUTH ?

WILD ORCHIDS in LUXEMBOURG

Orchids are the second largest plant family in the world, with over 30,000 known species. They are masters of deception in attracting their pollinators by unusual means.

The unique diversity and stunning display of orchid flowers have fascinated people for centuries. Most people know orchids as decorative house plants on the windowsill. Such cultivars with oversized flowers in numerous colour variations of originally tropical orchids are produced artificially by the millions in sterile test tubes on nutrient solutions.

Luxembourg is home to 45 orchid species that grow in different habitats. Nine of them unfortunately are regionally extinct. Orchids are sensitive indicators of biologically intact habitats and their presence is often accompanied by other rare animal and plant species



A unique collection

The award-winning botanical models by Sebastian Brandt (Fa. Reco-Brandt, Kornhochheim, Germany) are remarkable synthetic resin casts of live plants. By means of a novel replication process, they are handcrafted in elaborate detail. This makes the manufacturing of high-quality botanical exhibits possible in an unprecedented way.

All plant parts, such as leaves, flowers and stems are individually cast in special silicone blocks. The resulting moulds are filled with coloured synthetic resin mixtures. During the chemical hardening process, microscopically exact and durable synthetic casts of the respective plant parts are made, which are subsequently assembled to form the finished model. After final reworking and colouring, the Reco-Brandt orchid models exactly match the respective live plants in shape and colour.

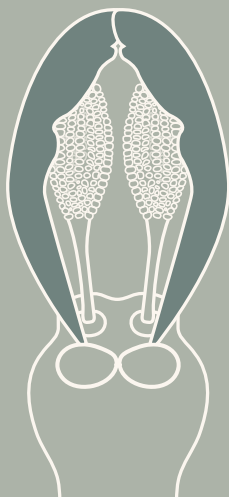


TYPICAL ORCHID

The flowers of wild orchids growing in Luxembourg usually cannot compete in size and colorfulness with those of the commonly-known cultivated orchids or tropical species. Nevertheless, they show the same 3-fold structure: the three outer petals are mostly similar, the middle of the three inner petals is enlarged and forms the often striking, shaped lip. By rotating the flowers 180°, the lip, which is upward in the bud, is directed downward and forward.

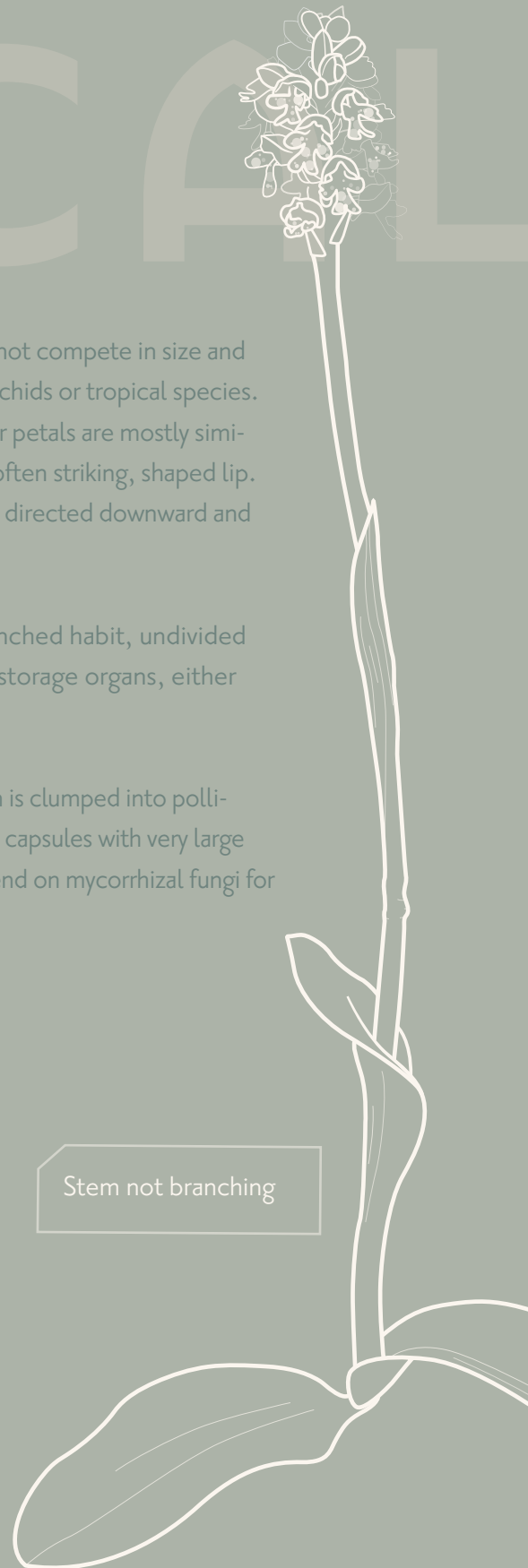
Other typical characteristics of orchids include an erect, unbranched habit, undivided oblong or oval leaves with parallel leaf veins, and underground storage organs, either paired root tubers or sparsely branched rhizomes.

The stamens form a column together where the pistil and the pollen is clumped into pollinia, which are dispersed as a whole by the pollinators. Orchids form capsules with very large quantities of microscopic seeds without nutritive tissue, which depend on mycorrhizal fungi for germination.



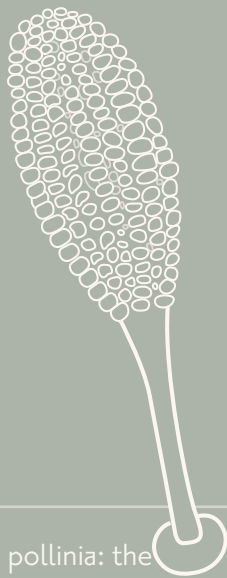
Stamens adnate to the ovary
to form the column

Stem not branching



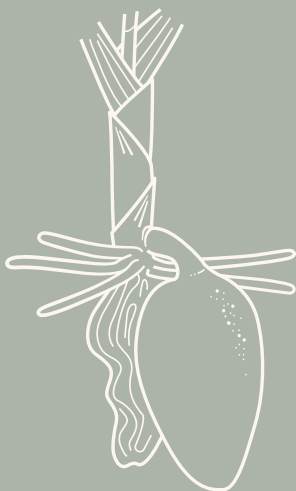
TYPICAL

TYPICAL



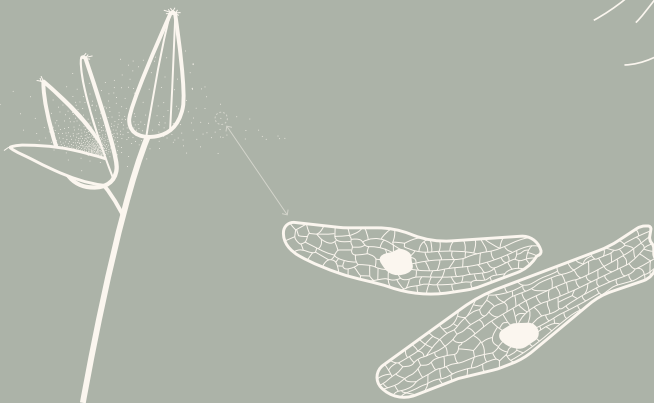
Pollen clumped into pollinia: the whole pollen mass is distributed at the same time

Paired tubers or fleshy, little branching rhizomes as storage organs; in spring one tuber gives rise to the flowering stem, the other accumulates reserves in the form of starch for the following year



ORCHID

Symbiosis with mycorrhizal fungi: The mycelial filaments of the fungi grow into orchid seeds and roots. The plant receives nutrients from the fungus that it cannot produce itself



Microscopic seeds lacking nutritive tissue



In the Red List of the Vascular Plants of Luxemburg orchids are assigned to the following categories to evaluate their threat status (according to IUCN).

- extinct in our country **RE**
- critically endangered **CR**
- endangered **EN**
- threatened **VU**
- just not yet threatene **NT**
- not threatened **LC**



PICKING FORBIDDEN!

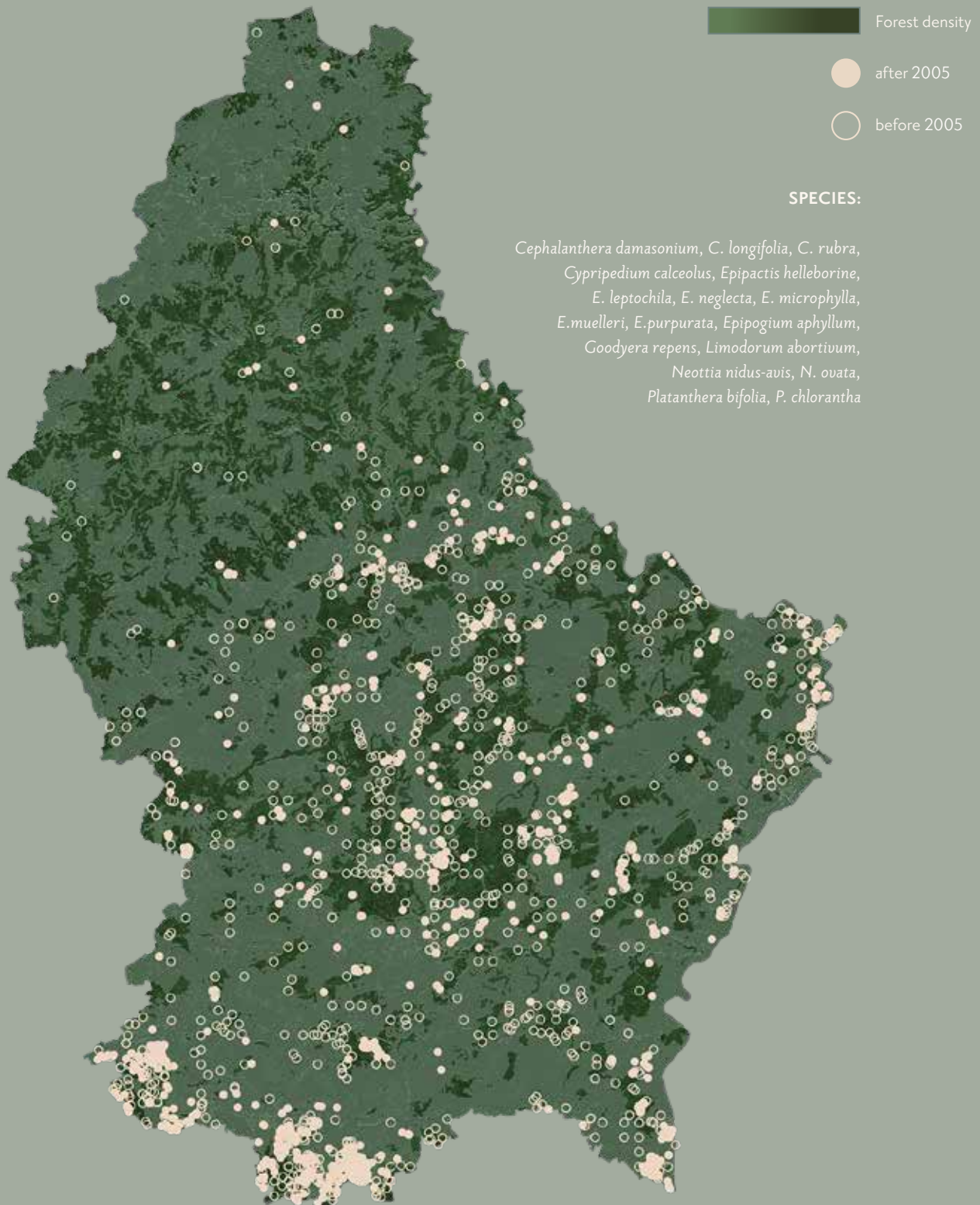
In Luxembourg, all orchids are protected. They must not be harvested, destroyed or otherwise damaged. This is not yet enough to ensure the survival of the species in the long term. The appropriate habitats must also be preserved.

Semi-dry grasslands, unimproved wet meadows and other nutrient-poor open grassland sites are characterised by a high species richness with many specialist animal and plant species (such as orchids). The biggest threats to these valuable habitats are the lack of or inadequate use or management and the unintentional nutrient input from adjacent, intensively cultivated agricultural surfaces. Many areas are isolated and small in extent, which means that there is no exchange between sites and many remnant populations have little chance of survival in the long term.

Many orchid sites are in nature reserves or protected habitats. These areas need to be regularly maintained, so that the orchid populations are preserved in the long term. This care is provided by the municipal associations for nature conservation, the biological stations, the Nature Administration with the district foresters and NGOs for the protection of nature.

ORCHID OCCURRENCES

IN THE FOREST (FOR)





LIFE IN THE FOREST

Some orchid species are perfectly adapted to life in the dark forest. The greatest diversity, though, is found in clearings and at the forest edge where there is more light. In Luxembourg orchids occur in the following forest types

- On the Luxembourg sandstone, beech trees form near-natural forest stands with a rich herbaceous layer in clearings.
- The lime beech forest is found on calcareous soils, for instance over the Muschelkalk in the Moselle region or the Dogger of the Minett in the south of Luxembourg.
- The oak-hornbeam forest develops on soils with more clay, where it is either too wet or too dry for the beech.
- On some south-facing slopes, there is the slightly more open thermophile dry forest.
- Natural coniferous forests do not occur in Luxembourg. However, spruces and pines have been planted in forests in many places.



COMMON TWAYBLADE

Neottia ovata

DE: Großes Zweiblatt

LB: Grousst Zweeblat

FR: grande listère

🌸 VI-VII

CR EN VU NT **LC**



photo : Sebastian Brandt

The common twayblade is easily recognized by its two large, almost opposite leaves. A strip along the lip of the inconspicuous flowers secretes copious nectar, attracting insects. A drop of glue oozes from the pollen packets at the slightest touch, solidifying in seconds and sticking the pollen load to the insect's head. The common twayblade, which is very common in the Gutland, grows in moist forests and on calcareous lawns.





BIRD'S-NEST ORCHID

Neottia nidus-avis

DE: Vogel-Nestwurz

LB: Vullennascht-Zweeblat

FR: néottie nid-d'oiseau

🌸 VI-VII

CR EN VU NT **LC**



photo : Eric Threinen

The bird's-nest orchid owes its name to its roots, which are intertwined like a bird's nest. This orchid feeds exclusively on the underground filaments of its fungal partner and is light-independent. It forms almost no chlorophyll and thus appears brownish. It grows mainly in shady deciduous and coniferous forests of the Gutland.





photo : Eric Threinen



GHOST ORCHID

Epipogium aphyllum

DE: Blattloser Widerbart

LB: Ouniblat-Geschterorchidee

FR: épipogon sans feuilles

🌸 VI-VIII

CR EN VU NT LC

The ghost orchid also appears yellowish brown, as it does not form any leaf green and feeds exclusively on its fungal partners. The flowers of the ghost orchid can be seen for a few days in July only in rainy years with high humidity and warmth . The species lives hidden in the moist mulm of dark, old beech forests. The only known current occurrence of the ghost orchid in the Benelux region is in a sloping beech forest near Walferdingen.





VIOLET BIRD'S NEST

Limodorum abortivum

DE: Violetter Dingel

LB: Mof Limodore

FR: limodore violette



V-VI

RE

CR

EN

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LC



photo : Eric Threinen

The violet bird's nest does not form green leaves. Its flowers rarely open fully and pollination often occurs by self-pollination. The species appeared in Luxembourg in the 19th century in several locations within dry-warm forests on southern slopes, including around the capital and between Grevenmacher and Echternach. The last known record was in 1965 on the Hoelt near Rosport.





YELLOW LADY'S SLIPPER ORCHID

Cypripedium calceolus

DE: Frauenschuh

LB: Giel Venusschlapp

FR: sabot-de-Vénus

🌸 V-VI

RE

CR

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The bright yellow, cup-shaped lip of the yellow lady's slipper orchid attracts insects that cannot find a grip on the smooth walls and slip into a trap. The only way to freedom is through a narrow tube, past the stamens and stigma, pollinating the flower. The yellow lady's slipper grows in sparse deciduous and mixed coniferous forests on nutrient-poor limestone soils. In Luxembourg, it grew in forests around Grevenmacher, but has not been observed since 1957.





photo : Sebastian Brandt

LESSER BUTTERFLY ORCHID

Platanthera bifolia

DE: Weiße Waldhyazinthe

LB: Wäiss Kräizblumm

FR: platanthère à deux feuilles

🌸 VI-VII

CR EN VU NT **LC**

Lesser butterfly orchids attract nocturnal butterflies with a sweet fragrance. Their long spur is typical for orchids that are pollinated by butterflies. The pollen packets of the lesser butterfly orchid are parallel and close together at the spur entrance. They adhere to the long proboscis of hawkmoths. The species is found in sparse forests, rough grasslands and wet meadows in both Gutland and Ösling.





photo : Sebastian Brandt

GREATER BUTTERFLY ORCHID

Platanthera chlorantha

DE: Grünliche Waldhyazinthe

LB: Gréngelzeg Kräizblumm

FR: platanthère à fleurs verdâtres

 V-VII

CR EN VU NT **LC**

Both butterfly orchid species native to Luxembourg are adapted to different butterfly families. The greater butterfly orchid sticks its broadly angled pollen packets mainly to the reticulated eyes of owl butterflies. It grows in sparse forests, forest edges, and on calcareous dry grasslands, mainly in the Gutland.





WHITE HELLEBORINE

Cephalanthera damasonium

DE: Bleiches Waldvögelein

LB: Bleeche Bëschvillchen

FR: céphalanthère à grandes fleurs

🌸 V-VI

CR EN VU NT **LC**



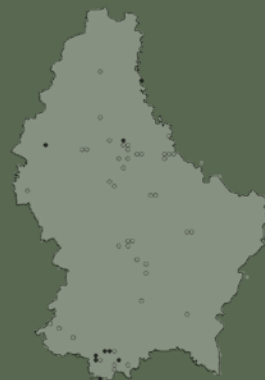
photo : Eric Threinen

Forest species such as the white helleborine can, thanks to fungal filaments inside their root cells, colonize habitats with only little sunlight. The white helleborine is often found on calcareous soils in the sparse deciduous and coniferous forests of the Gutland.





photo : Eric Threinen



NARROW-LEAVED HELLEBORINE

Cephalanthera longifolia

DE: Schwertblättriges Waldvögelein

LB: Laangbliederege Bäschvillchen

FR: céphalanthère à feuilles en épée



V-VII

CR

EN

VU

NT

LC

The narrow-leaved helleborine resembles the white helleborine, but differs in having long and narrow leaves. Since it is not so strongly bound to calcareous soils, it can be found in both the Gutland and Ösling in deciduous and coniferous forests.





RED HELLEBORINE

Cephalanthera rubra

DE: Rotes Waldvöglein

LB: Roude Bëschvillchen

FR: céphalanthère rose

🌸 VI-VII

CR EN VU NT LC



photo : Eric Threinen

With their pointed petals, the large flowers of the red helleborine resemble the silhouette of a flying bird, hence the German common name “Waldvöglein”. This typical orchid of calcareous, sparse deciduous forests can now only be found in the former open-cast mining areas in the south of Luxembourg.





photo : Eric Threinen

BROAD-LEAVED HELLEBORINE

Epipactis helleborine

DE: Breitblättrige Stendelwurz, Sitter

LB: Breetbliedereg Harespelorchidee

FR: épipactis à larges feuilles



(VI)VII-IX

CR

EN

VU

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LC



Broad-leaved helleborine is the most common species of helleborine in Luxembourg. It has large green leaves and grows mainly by means of its own photosynthesis. It appears both in sparse deciduous and coniferous forests and their edges, as well as in the open country in semi-arid grasslands.





photo : Eric Threinen

MUELLER'S HELLEBORINE

Epipactis muelleri

DE: Müllers Stendelwurz

LB: Müller-Harespelorchidee

FR: épipactis de Müller



CR EN VU NT LC

The flowers of Mueller's helleborine lack adhesive bodies and their pollen packages disintegrate shortly after blooming. These features indicate that the flowers are adapted to self-pollination, although nectar can still be found in the flowers. The species makes an appearance in the Gutland on calcareous sites in forest clearings and along forest edges.





VIOLET HELLEBORINE

Epipactis purpurata

DE: Violetter Sitter, Violette Stendelwurz

LB: Roudelzeg Harespelorchidee

FR: épipactis pourpre

VIII-IX



CR EN VU NT LC

The violet helleborine differs from other helleborine species by its purple shaded stems and leaves. It is one of the most shade tolerant species of helleborine, as it forms a close association with mycorrhizal fungi. It grows in shady deciduous forests of the southwestern Gutland.





photo : Eric Threin



NARROW-LIPPED HELLEBORINE

Epipactis leptochila

DE: Schmalllippige Stendelwurz, Sitter

LB: Schmuellëpseg Harespelorchidee

FR: épipactis à lèvres étroites

 VII-VIII

CR EN VU NT LC

By its leaf shape and way of living, the narrow-lipped helleborine is located between the helleborine species that rely heavily on the supply of mycorrhizal fungi and these species that grow mainly with the help of their own photosynthesis. It can be found on calcareous sites and in shady beech forests.



photo : Eric Threin



SMALL-LEAVED HELLEBORINE

Epipactis microphylla

DE: Kleinblättrige Stendelwurz

LB: Klengbliedereg Harespelorchidee

FR: épipactis à petites feuilles



CR EN VU NT LC

The small-leaved helleborine only forms reduced, narrow leaves and depends on the supply of mycorrhizal fungi. This small and delicate species grows in shady and calcareous beech forests and in open places such as forest paths. In Luxembourg the species is very rare.





CREeping LADY'S-TRESSES

Goodyera repens

DE: Kriechendes Netzblatt

LB: Krauchend Netzblatt

FR: goodyère rampante

🌸 VII-VIII

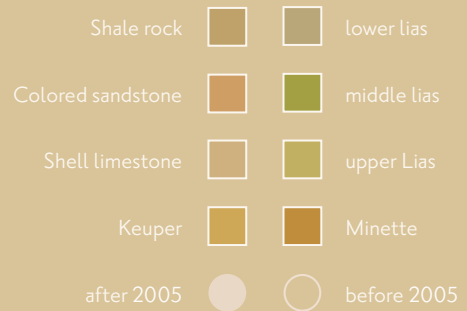
CR EN VU NT **LC**

The creeping lady's-tresses is the only orchid found in Luxembourg that forms evergreen, reticulate veined foliage. It grows in nutrient-poor pine forests, because with increased nutrient input it is quickly overgrown by grasses and dies. This orchid species is native to colder climates or mountains and spread in the early 20th century as a result of pine plantings



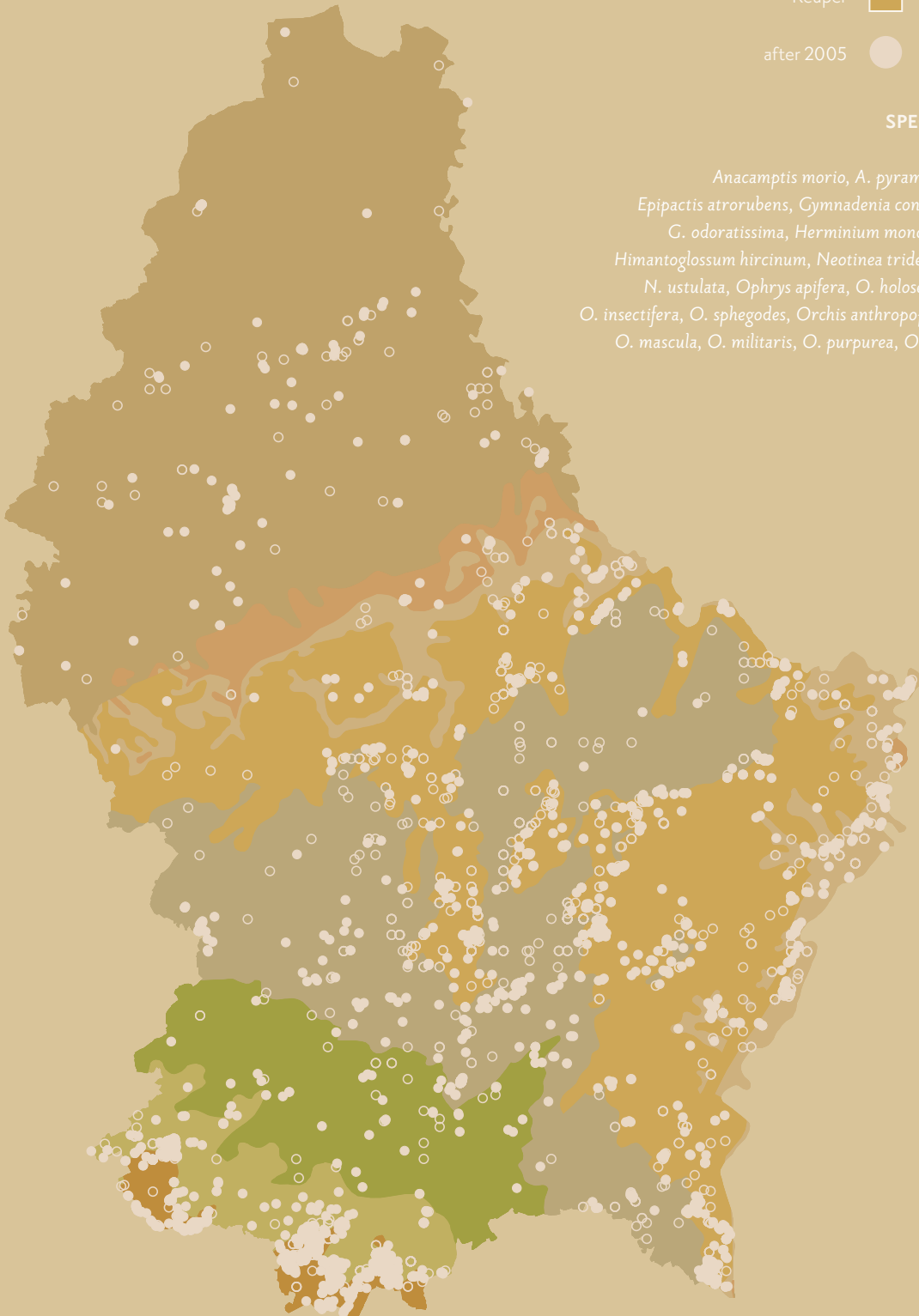
ORCHID OCCURRENCES

ON DRY GRASSLANDS (DRY)



SPECIES:

Anacamptis morio, *A. pyramidalis*,
Epipactis atrorubens, *Gymnadenia conopsea*,
G. odoratissima, *Herminium monorchis*,
Himantoglossum hircinum, *Neotinea tridentata*,
N. ustulata, *Ophrys apifera*, *O. holosericea*,
O. insectifera, *O. sphegodes*, *Orchis anthropophora*,
O. mascula, *O. militaris*, *O. purpurea*, *O. simia*



DRY GRASSLAND HABITAT



SURVIVING DROUGHT AND HEAT

Many orchids have their origin in the Mediterranean region and are able to colonize extreme sites of dry grasslands, with very few nutrients, lack of water in summer and strong temperature fluctuations. In Luxembourg, orchids are found on the following types of dry grasslands:

- ♦ In the area of the former open-cast ore mines, secondary calcareous grasslands rich in species have developed on the Dogger and Minette strata in the course of the last fifty years.
- ♦ The semi-arid grasslands of the Stone Marl Keuper are home to the most species-rich orchid sites. They have formed mainly on the slopes and hilltops of the Keuper landscape.
- ♦ Semi-dry grasslands on shell limestone are found on the southeastern border of the Oesling and in the Moselle valley. In the Ösling, silicate grasslands have developed on the south-facing slopes of the Devonian shales.



DARK-RED HELLEBORINE, ROYAL HELLEBORINE

Epipactis atrorubens

DE: Braunrote Stendelwurz

LB: Donkelrout Harespelorchidee

FR: épipactis pourpre noirâtre, épipactis brun rouge

🌸 VI-VII

CR EN **VU** NT LC



photo : Eric Threinen

The dark-red helleborine attracts pollinators with its vanilla-scented flowers. It lives in sparse forests with calcareous soil and on piled up rocky material poor in nutrients, such as road embankments. In Luxembourg, the dark-red helleborine is found in the Gutland, especially in the former open-cast mining areas of the south.





LIZARD ORCHID

Himantoglossum hircinum

DE: Bocks-Riemenzunge

LB: Bock-Rimmerzong

FR: orchis bouc

🌸 V-VII

CR EN VU NT **LC**



photo : Eric Threinen

With its extremely elongated strap-shaped flower lips and strong yet sweet goat smell, the lizard orchid is one of the most striking orchids in Luxembourg. Climate change over the last three decades with increasingly hot summers and wet, mild winters seems to favor the spread of this originally southwestern European species, in Luxembourg.





PYRAMIDAL ORCHID

Anacamptis pyramidalis

DE: Pyramiden-Spitzorchis, Pyramiden-Hundswurz

LB: Pyramiden-Hondswuerzel

FR: épipactis pourpre noirâtre, épipactis brun rouge



CR EN VU NT **LC**

photo : Sebastian Brandt



Despite its long spur and bright colour, there is no nectar for pollinators in the flowers of the pyramidal orchid. The lime-loving species is found in sunny rough pastures and dry grasslands. It has spread widely in Luxembourg in recent decades, especially in the former open-cast mining areas in the south of the country. This conspicuous species also likes to colonise filled-up road embankments.





GREEN-WINGED ORCHID

Anacamptis morio

DE: Kleiner Narr, Kleines Knabenkraut

LB: Boken-Hondswuerzel

FR: orchis bouffon een-winged orchid

🌸 V-VI

CR EN VU NT LC

The green-winged orchid is also called 'Little Fool' in German because of its colorful purple-green flower helmet. Until the beginning of the 20th century, the green-winged orchid was common on meager semi-arid grasslands in Luxembourg. However, due to the increased fertilisation of the formerly barren soils and the disappearance of traditional sheep grazing, the species is now threatened with extinction.





photo : Eric Threinen



THREE-TOOTHED ORCHID

Neotinea tridentata

DE: Dreizähniges Knabenkraut

LB: Dräizänn-Bouwekraut

FR: orchis tridenté



IV-VI

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The three-toothed orchid owes its name to its flower which has a helmet with three pointy teeth. It grows in exposed yet dry, short grasslands on calcareous soils. It is considered extinct in Luxembourg.





photo : Eric Threinen



BURNT ORCHID

Neotinea ustulata

DE: Brand-Knabenkraut

LB: Gesengt Bouwekraut

FR: orchis brûlé



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The inflorescence of the burnt orchid looks burnt, on account of its black-brown buds. This species from sunny, calcareous dry grassland is now extinct in Luxembourg. However, it still grows near the border on the orchid trail between Merttert and Konz.





photo : Eric Threinen



ELDER-FLOWERED ORCHID

Dactylorhiza sambucina

DE: Holunder-Kuckucksblume

LB: Hielenner-Fangerwuerzel

FR: orchis sureau



IV-VII

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LC

The elder-flowered orchid takes its name from the elderflower-like smell of its flowers. In our region only the yellow color variety is found, in more southern regions it can also be found together with the red color variety in one population. The elder-flowered orchid grows on acid soils in dry and fresh meadows and rough grasslands, but has been extinct in Luxembourg for a long time.





BEE ORCHID

Ophrys apifera

DE: Bienen-Ragwurz

LB: Beien-Aperhoerorchidee

FR: ophrys abeille



V-VI

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photo : Eric Threinen

The flowers of the bee orchid, as is common with *Ophrys* species, imitate the appearance of certain insects that they attract as pollinators. When the pollinia bend towards the stigma, the bee orchid is able to pollinate itself without any insect visit. This is the rule in our latitudes. It grows in dry, warm calcareous grasslands of the Gutland.





LATE SPIDER ORCHID

Ophrys holosericea

DE: Hummel-Ragwurz

LB: Bommelen-Aperhoerorchidee

FR: ophrys bourdon

🌸 V-VI

CR EN VU **NT** LC



photo : Eric Threinen

The flowers of the late spider orchid vary in color and in shape, and sepals of different colors are not uncommon. The late spider orchid grows on dry limestone grasslands in the southern and eastern part of the Gutland.





FLY ORCHID

Ophrys insectifera

DE: Fliegen-Ragwurz

LB: Mécken-Aperhoerorchidee

FR: ophrys mouche

🌸 V-VI

CR EN VU **NT** LC



photo : Eric Threinen

The flower of the fly orchid does not imitate a fly, but deceives male ragwort cicada wasps with its scent, which can be perceived for miles. Even the orientation of the flower hairs matches that of a female wasp. The fly orchid is found on dry, warm calcareous grasslands in the Gutland.





EARLY SPIDER ORCHID

Ophrys sphegodes

DE: Große Spinnen-Ragwurz

LB: Spannen-Aperhoerorchidee

FR: ophrys araignée

🌸 IV-VI

CR EN VU NT LC



photo : Eric Threinen

The lip of the early spider orchid strongly resembles a spider to humans, but instead the pollination is carried out here by sand bees. The early spider orchid is found on dry, sunny calcareous grasslands and is the rarest ragwort species in Luxembourg.





FRAGRANT ORCHID

Gymnadenia conopsea

DE: Mücken-Händelwurz

LB: Mécken-Handwuerzel

FR: ophrys bourdon

🌸 VI-VIII

CR EN VU NT **LC**

Larger strands of fragrant orchids are notably remembered for their wonderful fragrance. A mixture of clove and vanilla attracts various insects to the pinkish-purple inflorescences. But only those with long enough proboscises can reach the nectar in the narrow spur tube. The slender fragrant orchid is quite common in Luxembourg, on calcareous grasslands.





SHORT-SPURRED FRAGRANT ORCHID

Gymnadenia odoratissima

DE: Wohlriechende Händelwurz

LB: Dofteg Handwuerzel

FR: gymnadénie odorante



VI-VII

RE

CR

EN

VU

NT

LC

A short-spurred fragrant orchid is more delicate and can be distinguished from a fragrant orchid by its shorter spur. Its flowers smell of cloves. In Luxembourg, the species was found on calcareous grasslands, but is now considered extinct.





MAN ORCHID

Orchis anthropophora

DE: Hängende Männchen

LB: Gaalgemännche-Bouwekraut

FR: orchis homme-pendu

🌸 V-VII

CR EN VU **NT** LC



photo: Eric Threinen

The flower lips of the man orchid resemble a small human silhouette. The species is also still called Ohnsporn, because the flowers do not have a spur. Nevertheless, insects find plenty of nectar in the flowers. The man orchid is found on sunny calcareous dry grasslands in the Gutland.





EARLY-PURPLE ORCHID

Orchis mascula

DE: Stattliches Knabenkraut, Männliches Knabenkraut

LB: Maans-Bouwekraut

FR: orchis mâle



The nectar decoying flowers of the early-purple orchid do not produce nectar, but mimic in colour and shape the flowers of other nectar plants blooming at the same time, in order to be attractive to pollinating insects. This is a widespread and highly successful pollination strategy of orchids. The early-purple orchid grows in rough pastures and forest edges and is quite common throughout the country.





MILITARY ORCHID

Orchis militaris

DE: Helm-Knabenkraut

LB: Zaldote-Bouwekraut

FR: orchis militaire



V-VI

CR

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LC



photo : Eric Threin

The military orchid owes its name to the shape of its petals which are partially fused together and thus look like a helmet. It grows on dry limestone grasslands and in sparse forests of the Gutland.





LADY ORCHID

Orchis purpurea

DE: Purpur-Knabenkraut

LB: Purpurroul Bouwekraut

FR: orchis pourpre



photo : Eric Threinen

The outer petals of the lady orchid are purple in colour, giving the flowers their typical bicolored appearance. The species is quite common on calcareous dry grasslands in the Gutland.





MONKEY ORCHID

Orchis simia

DE: Affen-Knabenkraut

LB: Afe-Bouwekraut

FR: orchis singe



V-VI

CR

EN

VU

NT

LC



photo : Eric Threinen

The flower lip of the monkey orchid resembles a monkey with its four long limbs. The species was thought to be extinct, but has been sighted again recently. It grows on sunny slopes and in light scrub on calcareous soil in the Gutland.





MUSK ORCHID

Herminium monorchis

DE: Einknollige Honigorchis

LB: Eenzelknoll-Hunnegorchidee

FR: orchis musc



VI-VII

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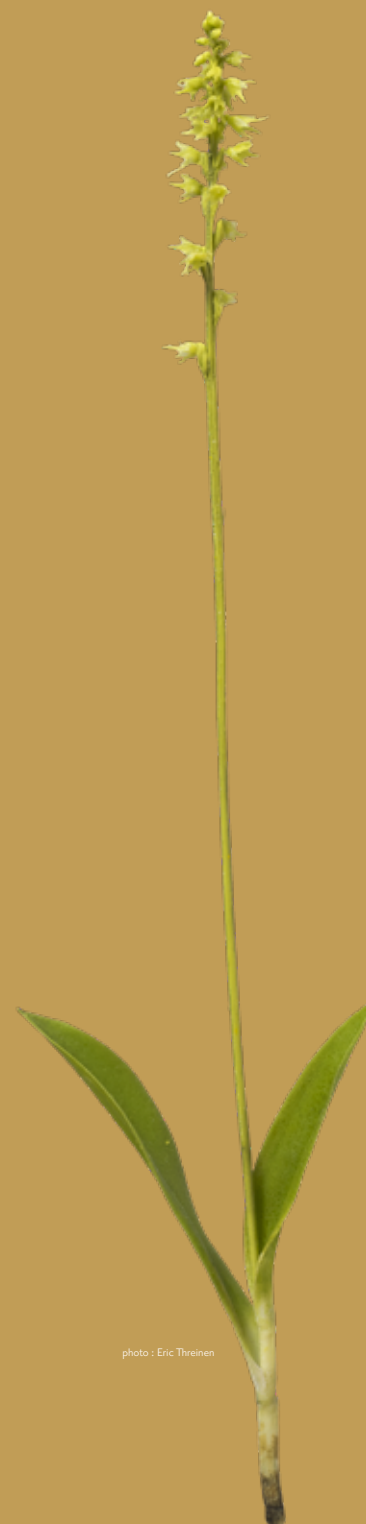


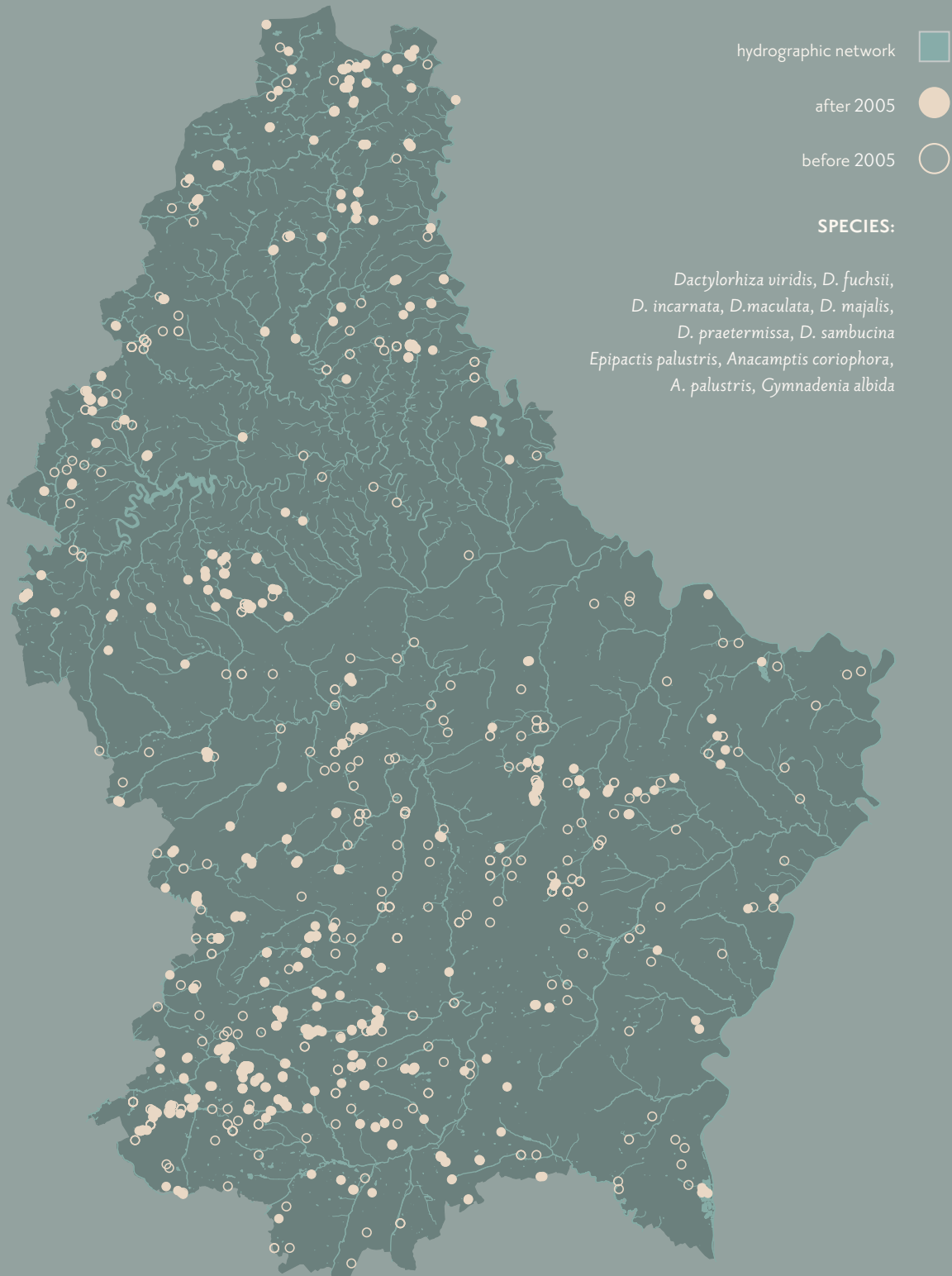
photo : Eric Threinen

The musk orchid (*H. monorchis*) owes its name to the single bulb it has as a storage organ. It is formed only after flowering at the end of underground stolons and not next to the old tuber as in the species of the genus *orchis*. Like many other orchids of the nutrient-poor wet meadows, the musk orchid has been extinct in Luxembourg for a long time.



ORCHID OCCURRENCES

ON WET AND ROUGH GRASSLANDS (MAR)



ORCHID LOCATION IN WET AND BOGGY MEADOWS

EITHER ORCHIDS OR FERTILIZER

With its very diverse grassland habitats, Luxembourg's structurally rich landscape is home to many animal and plant species and has evolved through traditional forms of cultivation. Now, at a time of increased industrial agriculture, traditional hay making and regular grazing of low-yield grassland, as well as small-scale arable farming, are disappearing. Largely due to mineral fertilisation, the existence of these diverse habitats with their distinctive species are severely threatened.

- ♦ Impounded wet meadows appear primarily in estate lands over impermeable soils with high clay content where water cannot percolate into deeper soil layers.
- ♦ In the Ösling, wet meadows are found along small streams in floodplains or at hillside springs. The acidic, mineral-poor soils contain less clay and are more permeable than in the Gutland.
- ♦ Grasslands on nutrient-poor soils only persist when hay is traditionally used. They are currently among the most threatened habitats in Luxembourg.



FROG ORCHID

Dactylorhiza viridis

DE: Grüne Hohlzunge, Grüne Fingerwurz

LB: Gréng Fangerwuerzel

FR: orchis grenouille



VI-VII

CR

EN

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LC



In meadows that become matted and overgrown due to lacking or unsuitable use as well as an input of nitrogen, the weakly competitive frog orchid is quickly displaced. In Luxembourg, it was thus only found in short-grassed meadows, dry grasslands and sparse forests. It can now only be found at one site in the southwestern part of the country.





MARSH HELLEBORINE

Epipactis palustris

DE: Sumpfsitter, Sumpf-Stendelwurz

LB: Suppen-Harespelorchidee

FR: épipactis des marais

🌸 VI-VIII

CR EN VU NT LC

The flowers of the marsh helleborine contain a lot of nectar with which they attract a large number of pollinators. The seeds are large compared to other orchid species and spread well because they float on water. The marsh helleborine grows in marshy meadows and in bogs. There are only very few that have made an appearance recently, especially in the extreme west of Luxembourg.



photo : Sebastian Brandt





BUG ORCHID

Anacamptis coriophora

DE: Wanzen-Knabenkraut

LB: Wanzen-Hondswuerzel

FR: orchis punaise

🌸 VI-VII

RE CR EN VU NT LC

The bug orchid bears its name because of its unpleasant smell of bugs. It used to be found 'quite frequently' in lean, lime-rich wet meadows in the 19th century. Today, unfortunately, it is considered extinct.





BOG ORCHID

Anacamptis palustris

DE: Sumpf-Hundswurz

LB: Suppen-Hondswuerzel

FR: orchis des marais



V-VII

RE

CR

EN

VU

NT

LC



photo : Eric Threinen

Two specimens in the museum's herbarium attest to the appearance of this species in Luxembourg at the end of the 19th century. Apart from that, no further finds of the bog orchid have been documented in the country. It is mainly found in south-eastern Europe, scattered in France and also at a few sites in the Palatinate.





photo : Eric Threinen



BROAD-LEAVED MARSH ORCHID

Dactylorhiza majalis

DE: Breitblättrige Kuckucksblume, Breitblättrige Fingerwurz

LB: Breetbliedereg Fangerwuerzel

FR: dactylorhize à larges feuilles

🌸 V-VI

CR EN VU NT **LC**

The flower characteristics of the broad-leaved marsh orchid, like those of other *Dactylorhiza* species, can be very variable. You can find the broad-leaved marsh orchid in nutrient-poor, moist to swampy meadows throughout the country. In the places where it does still grow, it often forms quite large populations.





photo : Eric Threinen

HEATH SPOTTED ORCHID

Dactylorhiza maculata

DE: Gefleckte Fingerwurz, Geflecktes Knabenkraut

LB: Gefleckt Fangerwuerzel

FR: dactylorhize tacheté

 VI-VII

CR EN VU NT **LC**

Heath spotted orchids can cross with closely related species of the same genus and form hybrids. They grow best in moist meadows and forest clearings with acidic to neutral soil, especially in the Ösling yet also in the Gutland.





photo : Eric Threinen

COMMON SPOTTED ORCHID, FUCHS' MARSH ORCHID

Dactylorhiza fuchsii

DE: Fuchs-Kuckucksblume

LB: Fuchs-Fangerwuerzel

FR: dactylorhize de Fuchs

🌸 VI-VII

CR EN **VU** NT LC

The common spotted orchid looks very similar to the spotted orchid, but differs in shape and lip pattern. The species appears on calcareous soils in both moist and dry meadows, in sparse forests and at forest edges, especially in the Gutland.





photo : Eric Threinen



EARLY MARSH ORCHID

Dactylorhiza incarnata

DE: Fleischfarbene Kuckucksblume, Fleischfarbener Fingerwurz

LB: Fleeschrout Fangerwuerzel

FR: orchis incarnat



V-VI



The external characteristics of the early marsh orchid are wide-ranging. However, the species can be recognised by its uppermost leaf, which may protrude above the inflorescence at the beginning of flowering. The early marsh orchid grows on calcareous, moist to swampy meadows and fens in the Gutland and Ösling.





photo : Eric Threinen



CUNGS' EARLY MARSH ORCHID

Dactylorhiza incarnata ssp. cungsii

DE: Cungs' Fleischfarbene Fingerwurz

LB: Cungs' Fleeschrout Fangerwuerzel

FR: dactylorhize incarnat de Cungs



CR EN VU NT LC

The cung's early marsh orchid is very rare. It was only described in 2016 and is an endemic subspecies to Luxembourg. It grows in a singular location, a waterlogged, very humid area of the Kiemercher nature reserve.





SOUTHERN MARSH ORCHID

Dactylorhiza praetermissa

DE: Übersehene Fingerwurz

LB: Vernoléisseggt Fangerwuerzel

FR: orchis négligé



VI-VII

CR

EN

VU

NT

LC


For a long time, the southern marsh orchid was not distinguished from the rather similar species of cung's early marsh orchid. It normally grows in damp to swampy meadows and in fens. In Luxembourg it also appears in former open-cast mining areas. The species has a distinctly Atlantic distribution and is located at the eastern limit of its range in Luxembourg.



LIST

LIST OF WILD ORCHIDS in LUXEMBOURG

	RL-status	habitat	page
<i>Anacamptis coriophora</i>	RE	MAR	98
<i>Anacamptis morio</i>	CR	DRY	60
<i>Anacamptis palustris</i>	RE	MAR	100
<i>Anacamptis pyramidalis</i>	LC	DRY	58
<i>Cephalanthera damasonium</i>	LC	FOR	34
<i>Cephalanthera longifolia</i>	VU	FOR	36
<i>Cephalanthera rubra</i>	EN	FOR	38
<i>Cypripedium calceolus</i>	RE	FOR	28
<i>Dactylorhiza fuchsii</i>	VU	MAR	106
<i>Dactylorhiza incarnata</i>	EN	MAR	108
<i>Dactylorhiza incarnata ssp. cunghii</i>	CR	MAR	110
<i>Dactylorhiza maculata</i>	LC	DRY	104
<i>Dactylorhiza majalis</i>	LC	MAR	102
<i>Dactylorhiza praetermissa</i>	EN	MAR	112
<i>Dactylorhiza sambucina</i>	RE	DRY	66
<i>Dactylorhiza viridis</i>	CR	DRY	94
<i>Epipactis atrorubens</i>	VU	DRY	54
<i>Epipactis helleborine</i>	LC	FOR	40
<i>Epipactis leptochila</i>	CR	FOR	46
<i>Epipactis microphylla</i>	CR	FOR	48
<i>Epipactis muelleri</i>	EN	FOR	42
<i>Epipactis palustris</i>	EN	MAR	96
<i>Epipactis pupurata</i>	EN	FOR	44



	RL-status	habitat	page
<i>Epipogium aphyllum</i>	CR	FOR	24
<i>Goodyera repens</i>	/	FOR	50
<i>Gymnadenia conopsea</i>	LC	DRY	76
<i>Gymnadenia odoratissima</i>	RE	DRY	78
<i>Herminium monorchis</i>	RE	DRY	90
<i>Himantoglossum hircinum</i>	LC	DRY	56
<i>Limodorum abortivum</i>	RE	FOR	26
<i>Neotinea tridentata</i>	RE	DRY	62
<i>Neotinea ustulata</i>	RE	DRY	64
<i>Neottia nidus-avis</i>	LC	FOR	22
<i>Neottia ovata</i>	LC	FOR	20
<i>Ophrys apifera</i>	LC	DRY	68
<i>Ophrys holosericea</i>	NT	DRY	70
<i>Ophrys insectifera</i>	NT	DRY	72
<i>Ophrys sphegodes</i>	CR	DRY	74
<i>Orchis anthropophora</i>	NT	DRY	80
<i>Orchis mascula</i>	LC	DRY	82
<i>Orchis militaris</i>	NT	DRY	84
<i>Orchis purpurea</i>	LC	FOR	86
<i>Orchis simia</i>	CR	DRY	8
<i>Platanthera bifolia</i>	LC	FOR	30
<i>Platanthera chlorantha</i>	LC	FOR	32

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Trick or truth? Wild orchids in Luxembourg

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