

Carnivorous Plants

Growing tips and culture

In this section we only discuss the plant groups which we grow and nurse ourselves. This gives the possibility to share our tips from pure experience. This is especially interesting for people living in the Netherlands or countries sea climate. Carnivorous plants have the name that they are difficult to keep. However, if you make sure that your environment has the basic elements, you can already grow considerably healthy plants. These are: Direct sunlight for 5 hours or more per day, rainwater and a cool winter period. If one of these factors is not enough present then it becomes more difficult to grow healthy plants. Below you can read that these factors already not too difficult to realise. Our largest interest are mainly the carnivorous plants from North America, and some species from South Africa and Australia. For the species not described here we rather refer to the Links page for more information. Of course there are several good books where you can learn much from. "The savage garden" from Peter D'Amato, as well as "Carnivorous plants" from Adrian Slack are two good examples.



Sarracenia

Substrate: *Sarracenia's* grow well in several mixes, important is that the substrate must be acid, and have an open structure. We have good experiences with a mixture of 70% peat

and 30% perlite in volumes measured. This makes repotting easy, the substrate is light, and easy to remove from the plants roots. It is recommended that you first rins the perlite with rainwater. The dust which comes of the perlite is bad for your health. In time on this mix small mosses will grow, what entirely decorates it. We leave adult *Sarracenia's* up to 2-4 years in their substrate without disturb them.

Pots: For adult *Sarracenia's* we use black square plastic pots from the Teku brand with a dimension of 15 x 15 x 20 (hight) cm. For young *Sarracenia's* we use 10 x 10 x 11 (hight) or 13 x 13 x 13 cm pots. Large pots often produce large plants, though I have seen large healthy *Sarracenia's* which did well in pots of "only" 10 x 10 x 11 cm.



Water: Always use rainwater. It is fairly easy to connect a waterbutt to a greenhouse or a nearby barn, and it is for free! Rainwater is slightly acidic, what is only in the benefit for the plants. According to several sources there are pollutions in rainwater such as heavy metals, but our plants thrive on it.

Temperature and light: These two factors will be explained together, because light and temperature goes hand in hand together with growing carnivorous plants. *Sarracenia's* need as much as possible direct sunlight. The most ideal situation would be from sunrise to dawn. But this is not always possible to realize. From experience we can say that if the *Sarracenia* receives at least 5 hours of sun per day in the

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growing season (roughly april till October) it will be enough to produce healthy colourfull pitchers. The temperature for the plants in the winterperiod can be from -10 to +10 degrees C. *Sarracenia* is known for being resistant to even much colder temps than -10. In the growing season the plants are used to a high temperature like 35 degrees C or more. These temperatures go hand in hand with strong sunshine. On cooler cloudy days the temp in the greenhouse does not exceed 25 – 28 degrees C. If we would heat the greenhouse the *Sarracenia* would grow faster, but due to the less light factor the pitchers would be elongiated and floppy.

Dividing *Sarracenia*'s: The best time for doing this is in the winterperiod. For the Northern hemisphere this means January – march. Lift the plant from the pot and shake away the substrate from the roots and the rhizome. The rhizome is brownish “carrot shaped” and from this the plant grows it's roots and it's pitchers. On the rhizome you can see there are several growing points. When these growing points are big enough they have developed their own root system, and then you can break it with the roots of. Pot these new plants in the same substrate separately in pots. When a rhizome is long but doesn't have any other growing points, it is possible to make a rhizome cutting. Cut with a knife a piece of 3-4 cm long rhizome. Make sure the motherplant still has at least 4 cm rhizome with roots. Pot this rhizome cutting separately, and you will notice that 2-5 new growing points emerge from the cutting in the coming spring. After 1 or 2 years you can divide this rhizome cutting again to have single plants.

Climate in a greenhouse: An unheated greenhouse in the garden is sufficient. Make sure the greenhouse will receive at least 5 hours of direct sunlight per day in the growing season. More is even better. Ventilation is important. We have automatic vents installed in the greenhouse ventilation windows, and this is a blessing for temperature control. When the temperature reaches 25 degrees C, the oil-pressured arm will automatically open the ventilation window, allowing warm air to go out. This way heat is not built up in the greenhouse. Though in summer the temperature can go up as far to 41-42 degrees C, while outside it is 32-33 degrees C

even with ventilation. But *Sarracenia* can handle these temperatures.



The Window sill: Many people grow *Sarracenia*'s in a window sill, and this is possible if you make sure the conditions meet the needs of the plant. “The temperature and light go hand in hand” phrase counts most for the windowsill, especially in winter time when the plant has it's dormant period. When the livingroom is heated, the pot of the dormant *Sarracenia* is also heated, and the plant starts to grow because it thinks spring has arrived. Due to the lack of sunlight, the plant will only produce elongiated and floppy pitchers with less color. If this would go on for a few seasons the plant can die due to energy waste. Try to move the *Sarracenia* to a windowsill were is no heating in the winter. A window on the south and south west is frequently ideal. When given direct sunlight for 4 up to 5 hours you will be able to grow fine plants. The plants will not be as large and colourfull as those in a greenhouse, but I have seen hobbyists with great results on large sunny windows.

Terrarium: Less suitable for a terrarium. The plants become rapidly large, and with a terrarium the sufficient sunlight in combination to the temperature is not ideal. The only advantage what a terrarium offers is holding the air humidity, and that is less important for *Sarracenia*'s. The air humidity in the average Dutch house is around the 40 - 60% and that is sufficient for *Sarracenia*.

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A bog: Most of the *Sarracenia*'s will do very well in a bog. Especially *S. flava*, *oreophila*, *purpurea*, and hybrids with these types are very frost-hardy. Also *leucophylla*, *minor* and the *rubra* subspecies are very hardy in the Dutch winter. The major difference between a bog and a greenhouse is that the growing season in a bog is much shorter. The *Sarracenia*'s in the greenhouse have colourful pitchers in May, and that time the *Sarracenia*'s only start to grow in a bog. But a good decorated bog can be an eye-catcher in the garden with its spectacular colours. It is wise to make sure the bog is at least 60 cm deep, to maintain a good water supply for dry periods in warm summertimes. Use strong UV-resistant pond-liner. The best substrate is a mix of peat and sand. When you use perlite, after a few heavy rainfalls the perlite will float on the wet mix and disturbing the sight and the balance of the substrate.



Dormacy: *Sarracenia*'s are very frost hardy, but ideal temperature approximately 4 degrees above zero. A cold bedroom will also be sufficient. The dormacy period is generally from November/December till march. The dormacy period can be used to divide the plants, and clean the plants such as clipping away brown leaves and pitchers. It is better to keep the pots not too wet in winter, just slightly moist. This way possible moulds and funghi can be prevented. Some *Sarracenia*'s like *flava* and *oreophila* form in the summer and at the

end of the season phyllodia, these thin 10-20 cm large leaves have no trap function. The shape is often as that of a sword. Don't clip these away, as phyllodia are used to absorb light in the winter and spring to stay healthy.

Darlingtonia californica: The growing conditions for *darlingtonia* is entirely the same as *Sarracenia*, though a remarks can be made; They don't like temperatures above 30 degrees C. Try to prevent high temperatures as it risks you to loose the plant, especially when the roots become too warm. Our plants seem grow better in a substrate that contains 100% pure sphagnum than a peat based one.

Dionaea muscipula: This plant requires the same growing condition as *Sarracenia*. As these plants are not so large a 10x10x11 (height) pot is sufficient. When you don't divide *Dionaea* every year or two years a 13x13x13 pot is recommended as the plant will multiply easily and become denser in the pot. In a winter with cold temperatures (lower than -5 degrees C) a layer of sphagnum on top of the plants in a bog will protect them to be safe. Dividing is the same as *Sarracenia*, only *Dionaea* will not form a thick rhizome. Instead the "knot" were the plant emerges from can be lifted and freed from the substrate. Then break away the parts were plants emerge from and pot up separately. As *Sarracenia* will grow larger and with more colour when undisturbed for a few years, *Dionaea* benefits from a repot. Some varieties grow so fast we repot every year. A fresh new substrate will induce a quick growburst in spring and good colourforming.

Hardy *Drosera:* Same conditions as *Sarracenia*, very winterhardy. Ideal to grow in bogs.

***Drosera regia, capensis* and all *binata*'s with its subspecies:** Same conditions as *Sarracenia*, only make sure the minimum temperature in winter is 5 degrees C. *Drosera binata* is frost hardy, but small plants can die. Never let *Drosera regia* freeze, it can die from the cold impact.

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Cephalotus follicularis: The same conditions as *Sarracenia*, though a little shade during heatwaves in the summer is appreciated. Also prevent this plant from freezing temperatures. Our experience is that plants benefit from deeper pots, like 13x13x13 or 15x15x20 (height) sizes. Mixing some sphagnum with the peat/perlite substrate will induce that the sphagnum will grow on the surface. This will create a better protection against periods of heatwaves, as sphagnum is always somewhat moist.

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