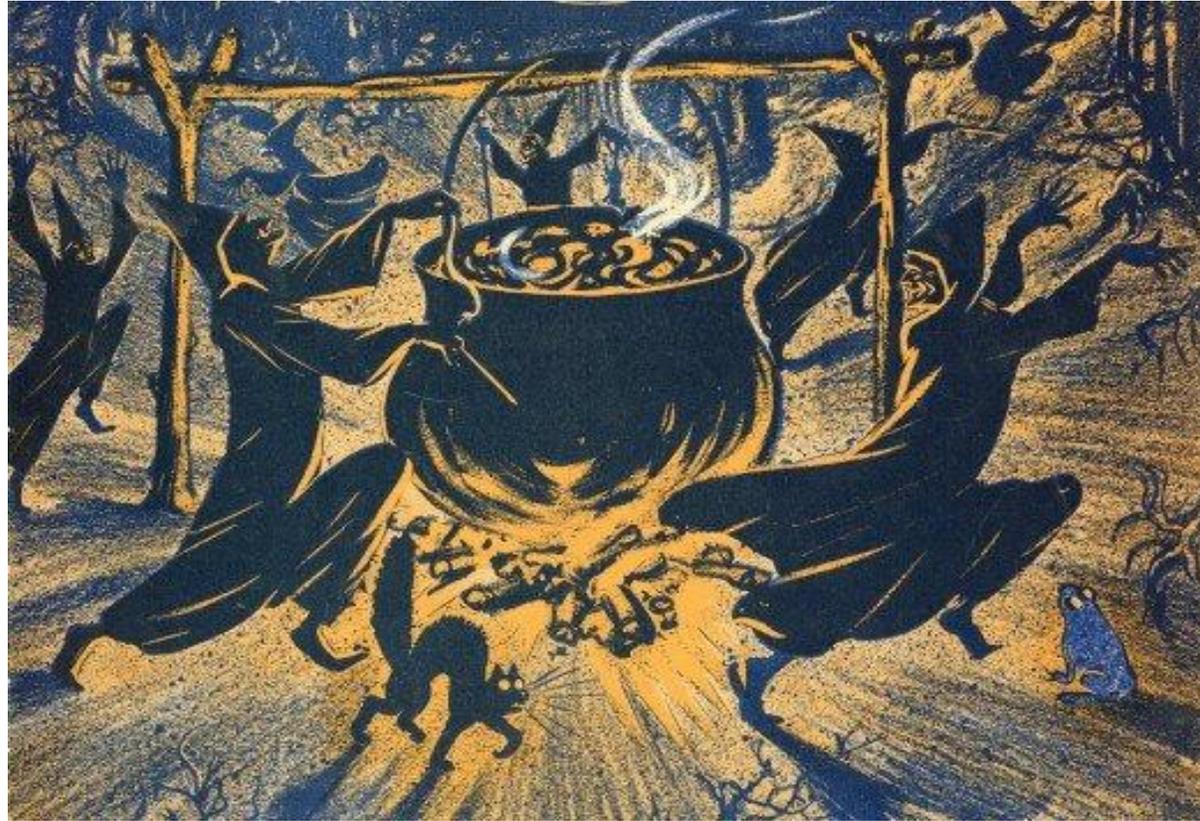


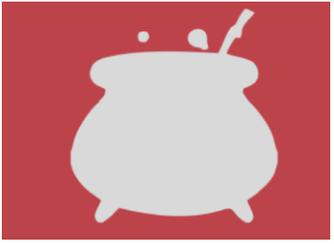


Toxic Plants



Toxic Plants

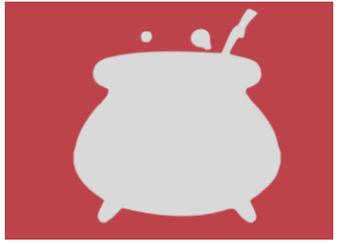




Toxic Plants



People and Pets  Plants

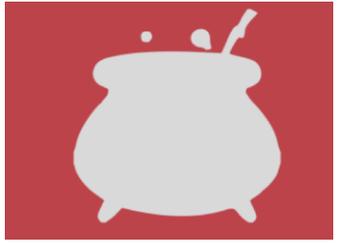


Toxic Plants

Toxicity Class:

- 1. Major Toxicity:** Serious illness or death
- 2. Minor Toxicity:** Ingestion may cause minor illnesses, such as vomiting or diarrhea.
- 3. Oxalates:** Juice or sap contain oxalate crystals. These needle-shaped crystals can irritate skin, mouth, tongue and throat, resulting in throat swelling, breathing difficulties, burning pain, and stomach upset.
- 4. Dermatitis:** Juice, sap, or thorns may cause skin rash or irritation. Immediately wash with soap and water after contact. Rashes may be very serious and painful.

With all 4 toxicities, it is suggested to call the CA Poison Control Center at (800) 222-1222 or your doctor.



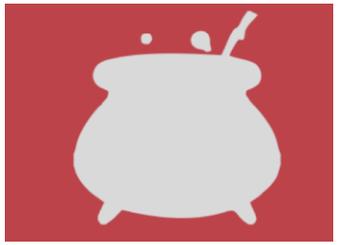
Toxic Plants

10 Garden plants that are toxic to pets & people (Toxicity Class)



1. Daffodil: (2,4)

- Flowers contains lycorine, a chemical compound that triggers vomiting.
- Bulb or other part of plant can cause vomiting, diarrhea, abdominal pain, heart rhythm abnormalities and respiratory depression.



Toxic Plants

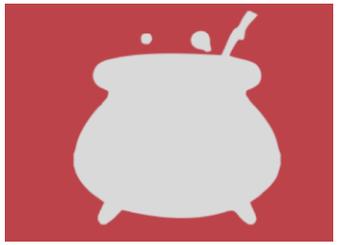
☠️ 10 Garden plants that are toxic to pets & people (Toxicity Class)

2. Tulip and Hyacinth: (2,4)

- Allergenic lactones in tulips and similar alkaloids in hyacinths, both chemical compounds, are concentrated in bulb. Can cause profuse drooling, vomiting & diarrhea leading to dehydration, etc.
- Excessive ingestion -- more severe signs such as increased heart rate and changes in respiration.
- All plant parts are toxic.



*Make sure your dog isn't digging up the bulbs!
And, don't confuse bulbs for onions...*



Toxic Plants

☠️ 10 Garden plants that are toxic to pets & people (Toxicity Class)

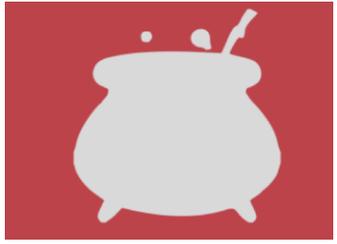


Cats are especially sensitive to lily poisoning.

* NOTE: Though not really lilies, calla lilies may be confused with lilies by their name, which is why they are included.

3. Lily: (2,3,4)

- Some (Peace, Peruvian and *Calla) contain oxalate crystals that cause minor signs of toxicity. True lilies (Tiger, Asiatic, Easter and Japanese Show) can be fatal.
- What makes lilies so toxic? Unknown. A cat ingesting any part of plant can cause complete kidney failure in 36-72 hrs.
- Even small ingestions, such as pollen, can be fatal to cats.



Toxic Plants

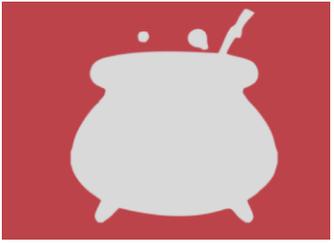
☠️ 10 Garden plants that are toxic to pets & people (Toxicity Class)

4. Lily of the Valley: (1,4)

- Contain cardiac glycosides – sugars affecting contractions of cardiac muscle.
- Ingestion: vomiting, diarrhea, decreased heart rate, heart rhythm abnormalities and possibly seizures.



*If you think your pet has ingested any one of these plants, call your veterinarian at once. **In some cases, by the time symptoms appear, it's too late to save your pet.***



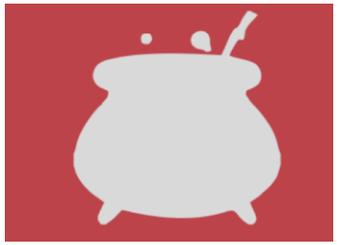
Toxic Plants

☠️ 10 Garden plants that are toxic to pets & people (Toxicity Class)



5. Oleander: (1,4)

- All parts, including smoke, contain cardiac glycosides & saponins. When ingested has symptoms of vomiting, cramping and bloody diarrhea.
- Irritation to the mucosal membranes, resulting in burning around mouth and increased salivation.
- Cardiac abnormalities, affects to central nervous system. Can be fatal with relatively small amounts ingested.



Toxic Plants

☠️ **10 Garden plants that are toxic to pets & people (Toxicity Class)**



6. Chrysanthemum (including Daisies): (2,4)

- Chemical Compounds, lactones and pyrethrins and others are very toxic, particularly to cats, dogs, horses and can cause dermatitis in humans. If ingested, can cause gastrointestinal tract irritation and affect nervous system.



Toxic Plants

☠️ **10 Garden plants that are toxic to pets & people (Toxicity Class)**



7. Cyclamen: (2,4)

- Tubers or rhizomes contain the toxic glycoside cyclanin, a terpenoid saponin: can destroy red blood cells, salivation, vomiting, diarrhea, refusal to eat, seizures and heart rhythm abnormalities, and even death.



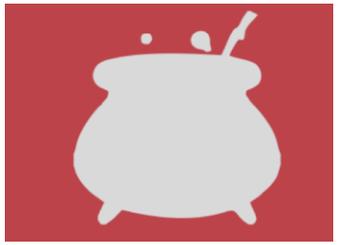
Toxic Plants

☠️ 10 Garden plants that are toxic to pets & people (Toxicity Class)



8. Rhododendron, including azaleas (1)

- Resins called grayanotoxins bind to and modify sodium channels, which allows calcium movement into cells.
- Leaves and nectar are most toxic, but all parts, including trimmings, are toxic.
- Toxicity includes: Changes in heart rate and blood pressure, weakness, tremors, seizures, paralysis, blurred vision and trouble breathing.



Toxic Plants

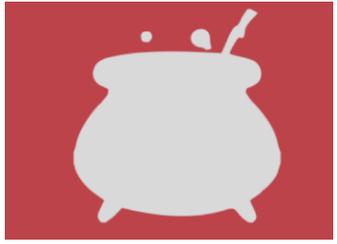
☠️ 10 Garden plants that are toxic to pets & people (Toxicity Class)

9. Cycad (such as Sago palm): (2)

- “Sago palm” is a cycad, not a true palm. All parts of the plant are poisonous.
- Chemical compounds: cycasin and B-methylamino-l-alanine, which are toxic to nervous system when ingested.
- Symptoms: vomiting, lethargy, black “tarry” feces, jaundice, increased thirst, hemorrhagic gastritis, blood clots, paralysis and death.



Not recommended as potted house plants in homes with pets. Ingestions as small as 1-2 seeds can be fatal.



Toxic Plants

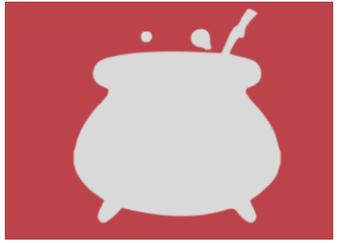
☠️ 10 Garden plants that are toxic to pets & people (Toxicity Class)



Remember: animals jump and dig, so reduce access to toxic plants. Dogs can easily dig and find fertilizer or bulbs buried beneath mulch. Err on the side of caution.

10. Fertilizers:

- Blood meal, bone meal, rose and plant fertilizers, pesticides and insecticides, iron.
- Many fertilizers only cause gastrointestinal irritation when consumed, but some, such as the above, are much more toxic.
- Vomiting, diarrhea, seizures, difficulty breathing, iron overload, hyperthermia and death.

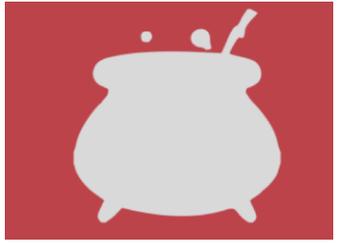


Toxic Plants

Herbs

Examples of potentially harmful herbal remedies:

Herb	Potential Toxic Effect
Borage (<i>Borago officinalis</i>)	Skin irritation
Calamus (<i>Acorus calamus</i>)	Skin irritation, stomach upset, may cause cancer
Chaparral (<i>Larrea indentata</i>)	Liver damage
Comfrey (<i>Symphytum officinale</i>)	Liver damage
Ephedra; Ma-huang (<i>Ephedra sinica</i>)	Agitation, high blood pressure, rapid heartbeat, convulsions
Germander (<i>Teucrium chamaedrys</i>)	Liver damage
Life root (<i>Senecio aureus</i>)	Liver damage
Pennyroyal (<i>Mentha pulegium</i>)	Liver damage. Concentrated oil can cause convulsions, shock, and multi-organ failure
Sassafras (<i>Sassafras albidum</i>)	Liver damage. Concentrated oil can cause hallucinations, trembling, shock, and possibly cancer.



Toxic Plants

Hay Fever Plants

- **Hay Fever:**
 - Grasses
 - Weeds
 - Trees
- **Control Hay Fever:**
 - Limit outdoor activity
 - Keep your windows closed
 - Take medicine before contact with pollen
 - Avoid planting male plants
 - Don't plant any pollen-producing plants near windows
 - Keep these plants pruned
 - Wear mask, glasses, gloves, long-sleeves
 - Wash pets before they come in the house
 - Avoid touching your face and eyes
 - Shower, wash hair, change clothes after being outside



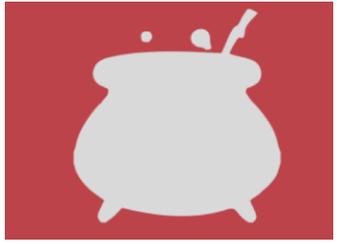
Toxic Plants

Preventing Poisoning Exposures



Children

- Consider removing toxic plants from your garden.
- Teach children not to put any part of a plant in their mouth: leaves, stems, bark, seeds, nuts, berries, and bulbs.
- Don't suck nectar, make "tea" from leaves, or chew on jewelry made from seeds or beans.



Toxic Plants

Preventing Poisoning Exposures

Label Plants

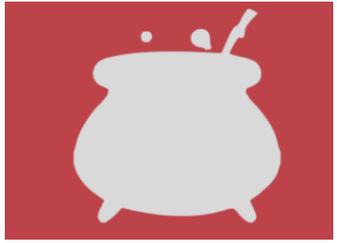
- Both common and scientific name
- Show grandparents and babysitters where the plant label is. Know the names of your plants before a poisoning happens.

Other information

- Do not eat plants or mushrooms collected outdoors unless you are certain they are safe.

Handling Toxic Plants

- Store bulbs and seeds away from children, pets, and food-storage areas.
- Use protective gloves & clothing when handling skin irritant plants. Wash clothes.
- Discard plant leaves and flowers in a safe way so kids and pets can't get them.
- Smoke from fires from poisonous plants, ex. poison oak, oleander, etc. can irritate or harm the eyes, throat, and other parts of the body.



Toxic Plants

First Aid for exposures to Toxic Plants

Treatment of Exposures

Do NOT induce vomiting

Mouth: Remove any remaining parts of the plant or mushroom from victim's mouth and clean out the mouth. Give a small amount of water.

Skin: Wash any skin exposed to the plant with soap and water as soon as possible.

Eyes: Flush eyes with lukewarm water for 10-15 minutes. Be very gentle, as vigorous or prolonged rinsing can hurt the eyes.

CALL the California Poison Control System at **1-800-222-1222**

If advised to take a person to the hospital, bring the plant or a piece of it along with the label.

Even if you are not sure, call the poison center for help. It will not be waste of time.

Do not wait for symptoms to appear. Treatment will be more difficult once symptoms have developed.

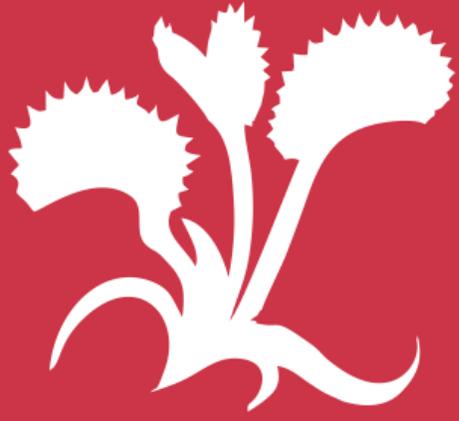


Toxic Plants

Safe Plants

There are still plenty of beautiful plants for your home and garden!





Carnivorous Plants









Water needs to be low in dissolved mineral content

Methods of growing carnivorous plants



**Allow temperate
carnivorous plants to
have a dormant
period –
approximately three
months**



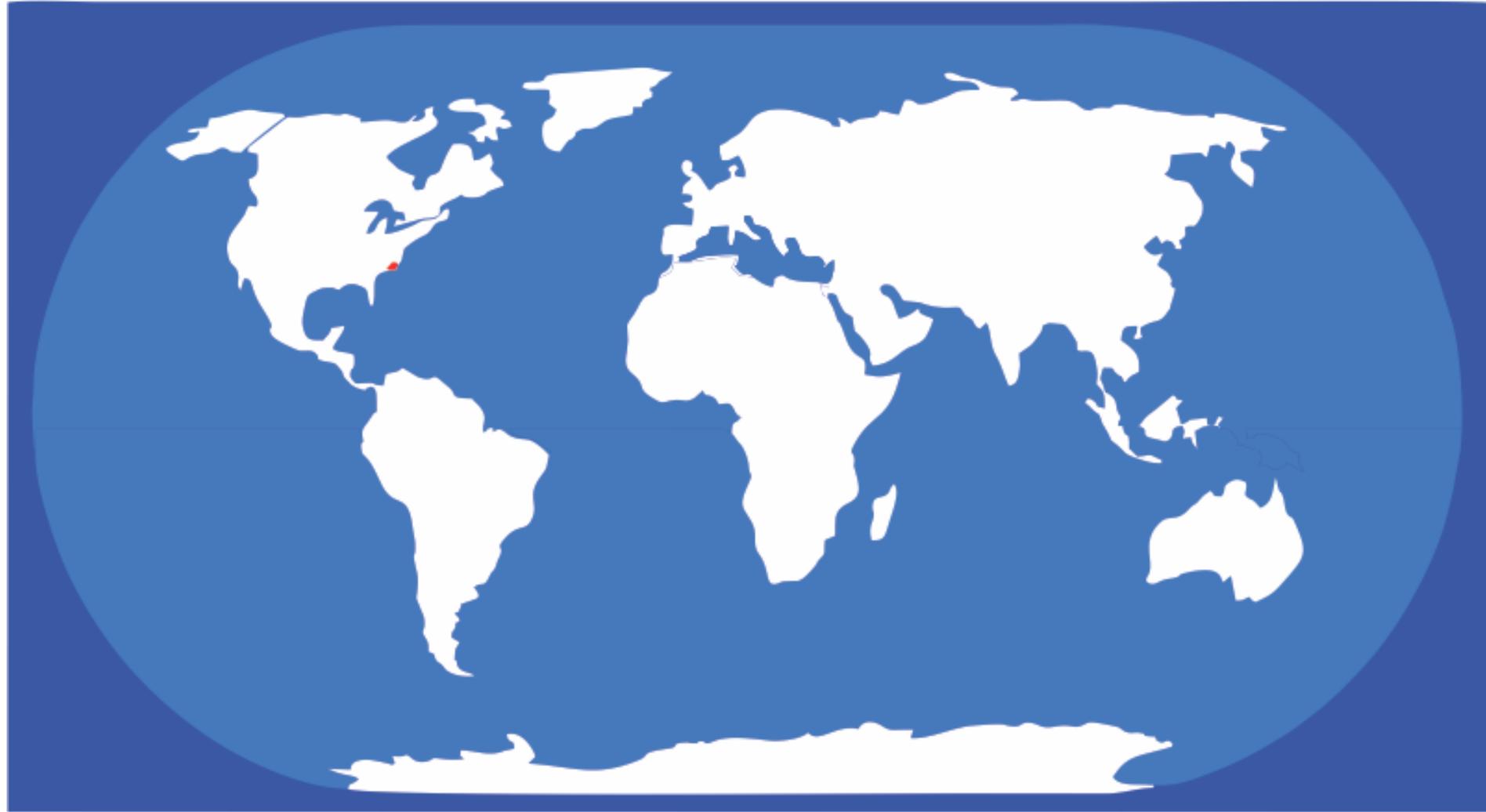


Feeding your plants

**Fertilize
carnivorous plants
using a spray
bottle
as a foliar feed**



Genus *Dionaea*



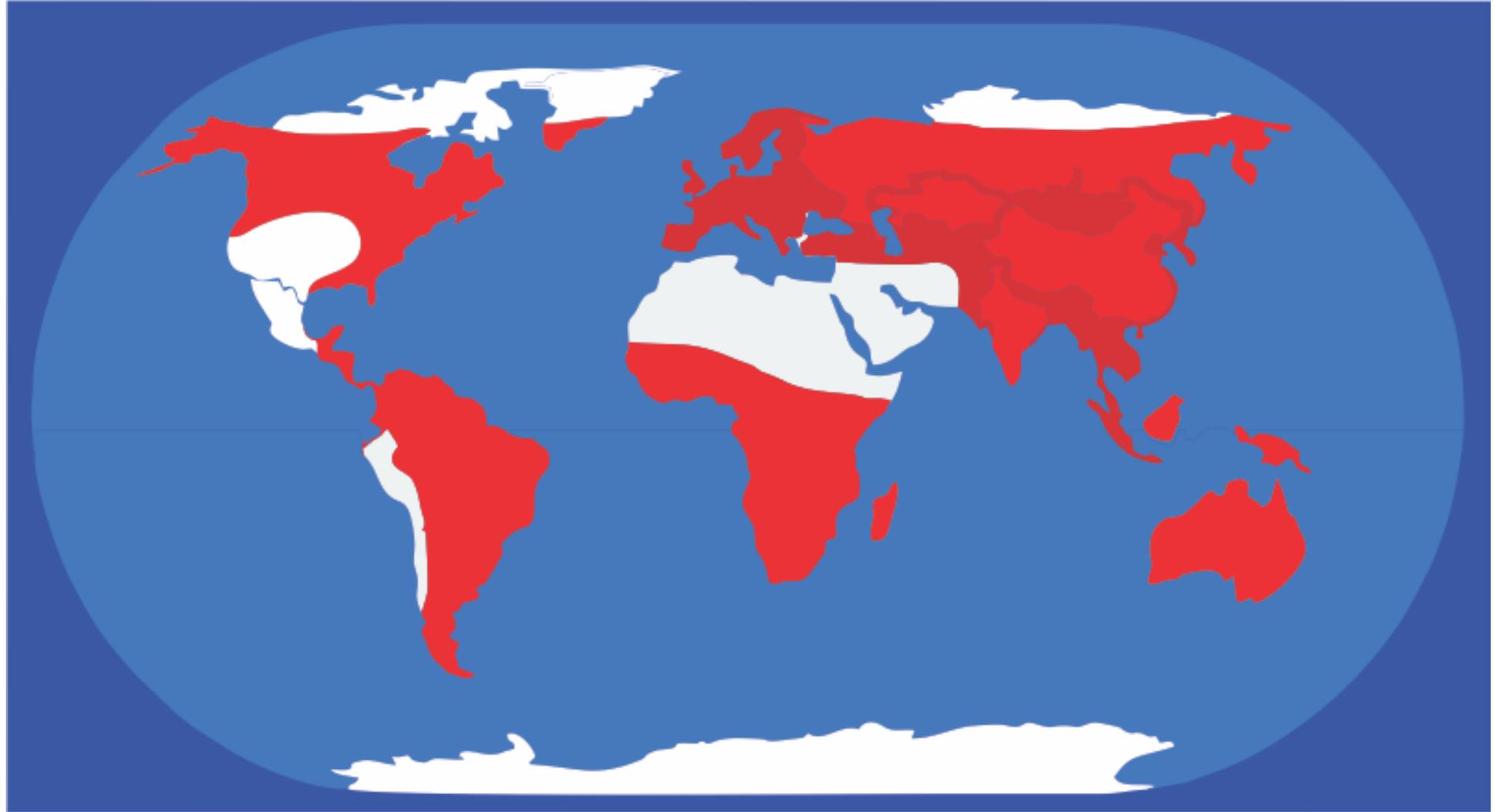


**Venus
flytrap
Dionaea
*spp.***



Venus flytrap
Dionaea spp.

Genus *Drocera*

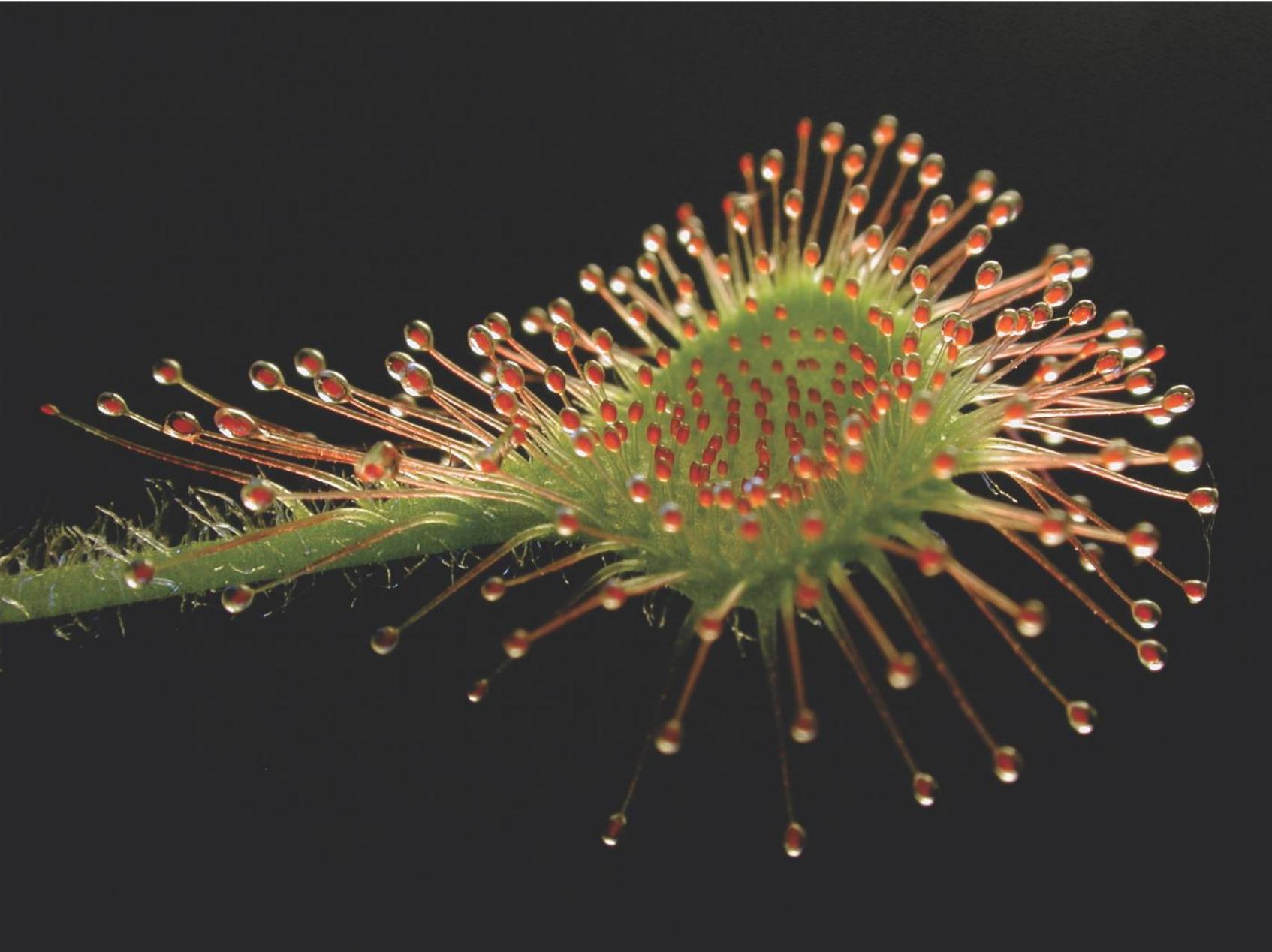




Sundew
Drosera spp.

Sundew

Drosera spp.





Carnivorous Plants

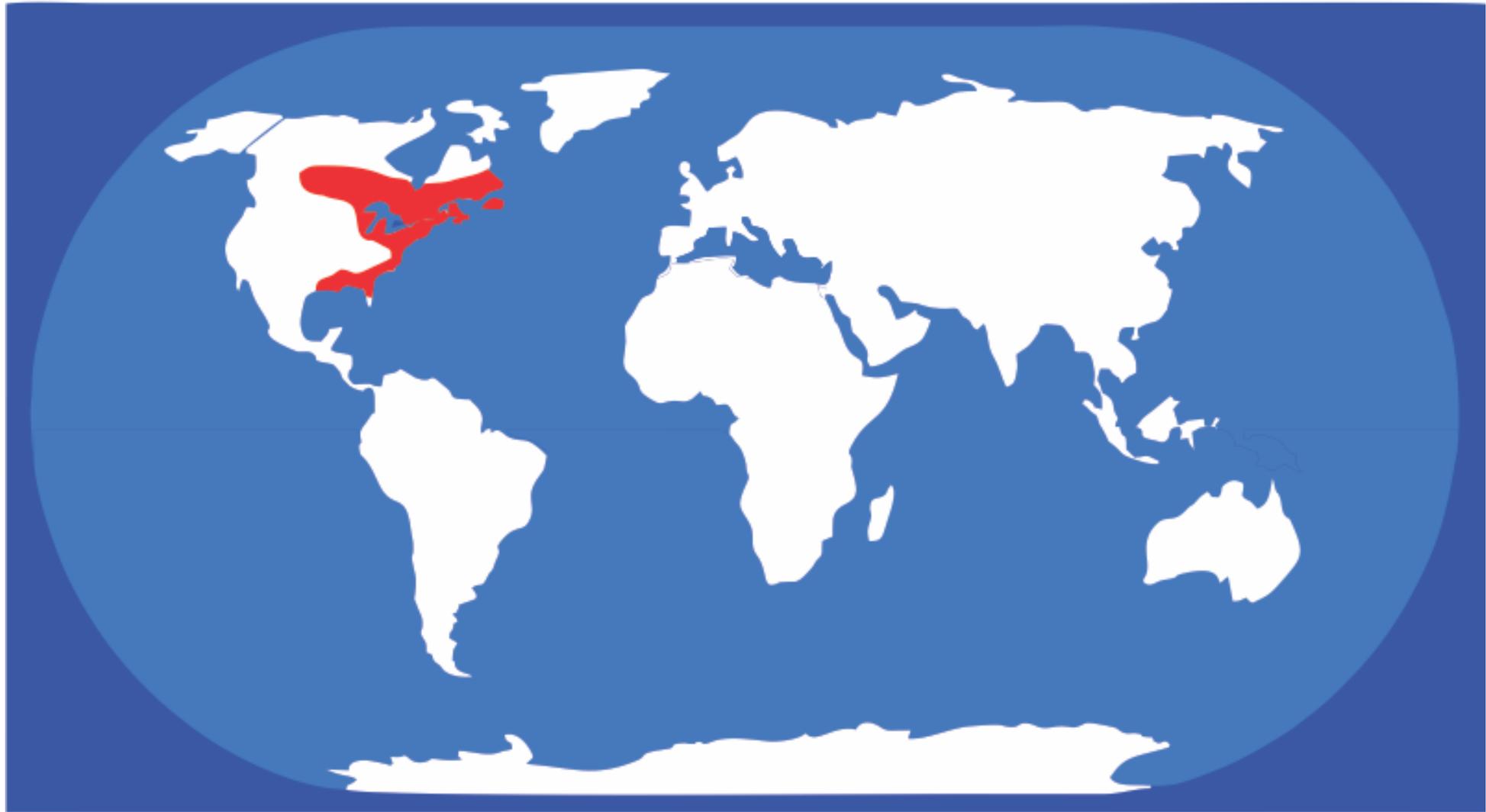
Carnivorous plants are denizens of sunny, warm, locations marked by a short supply of available nutrients. These mostly herbaceous perennials may be bog or rock dwellers, or epiphytes with access to little or no soil. To obtain essential nutrient supplementation (but not energy), carnivorous plants have modified leaves that trap protozoans, insects, or other small arthropods. The traps can be either active or passive, and similar forms have evolved independently in several plant families.

True plant carnivores digest prey via secreted enzymes. Protocarnivorous plants must rely on symbiotic bacteria to digest their prey. Interestingly, mosquito larvae, tadpoles, or other "house guests" are often found living safely in the water tanks of both proto and true carnivores alike.



Illustrations by: [unreadable]

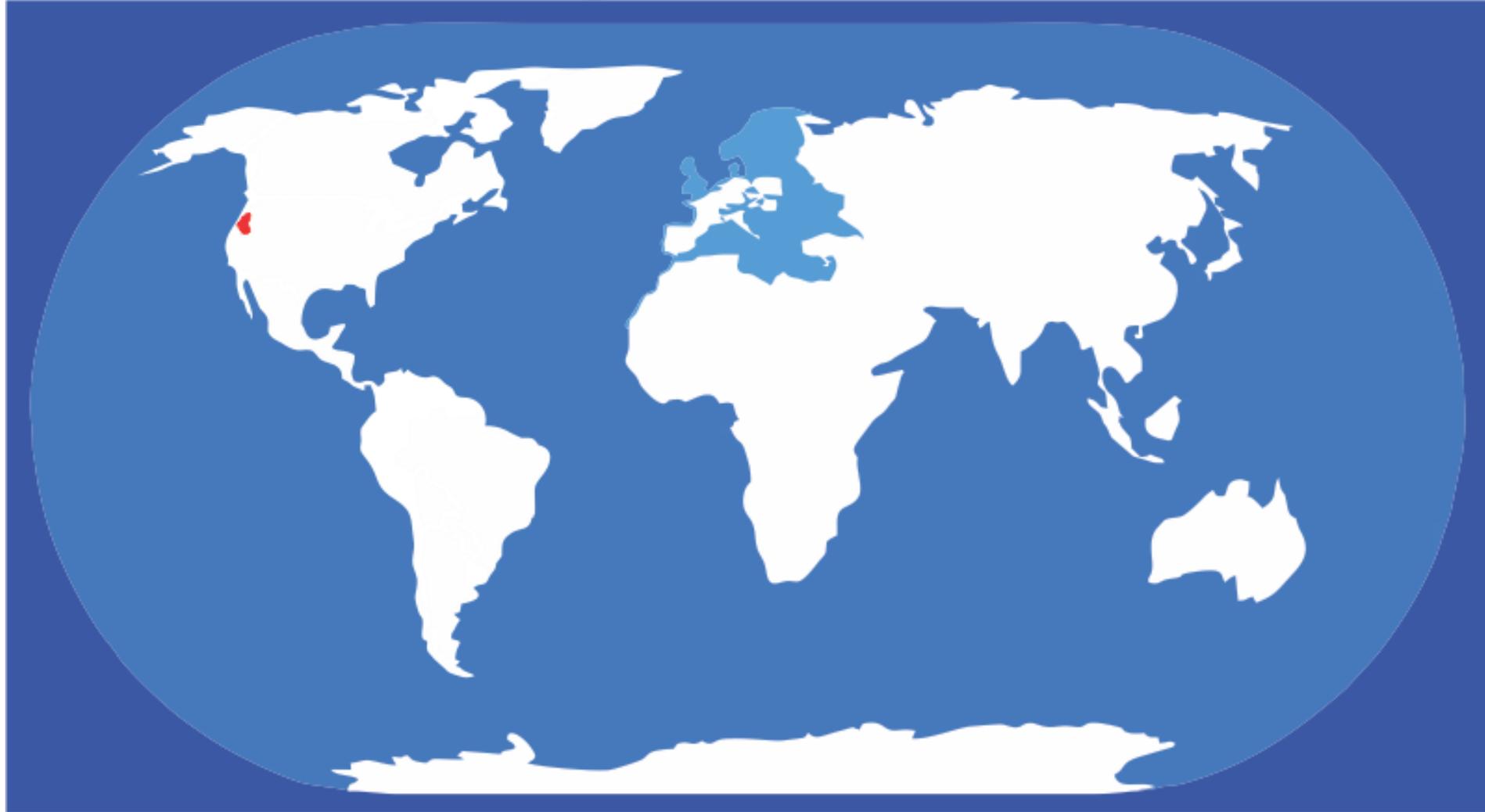
Genus *Sarracenia*



American Pitcher Plant *Sarracenia* spp.

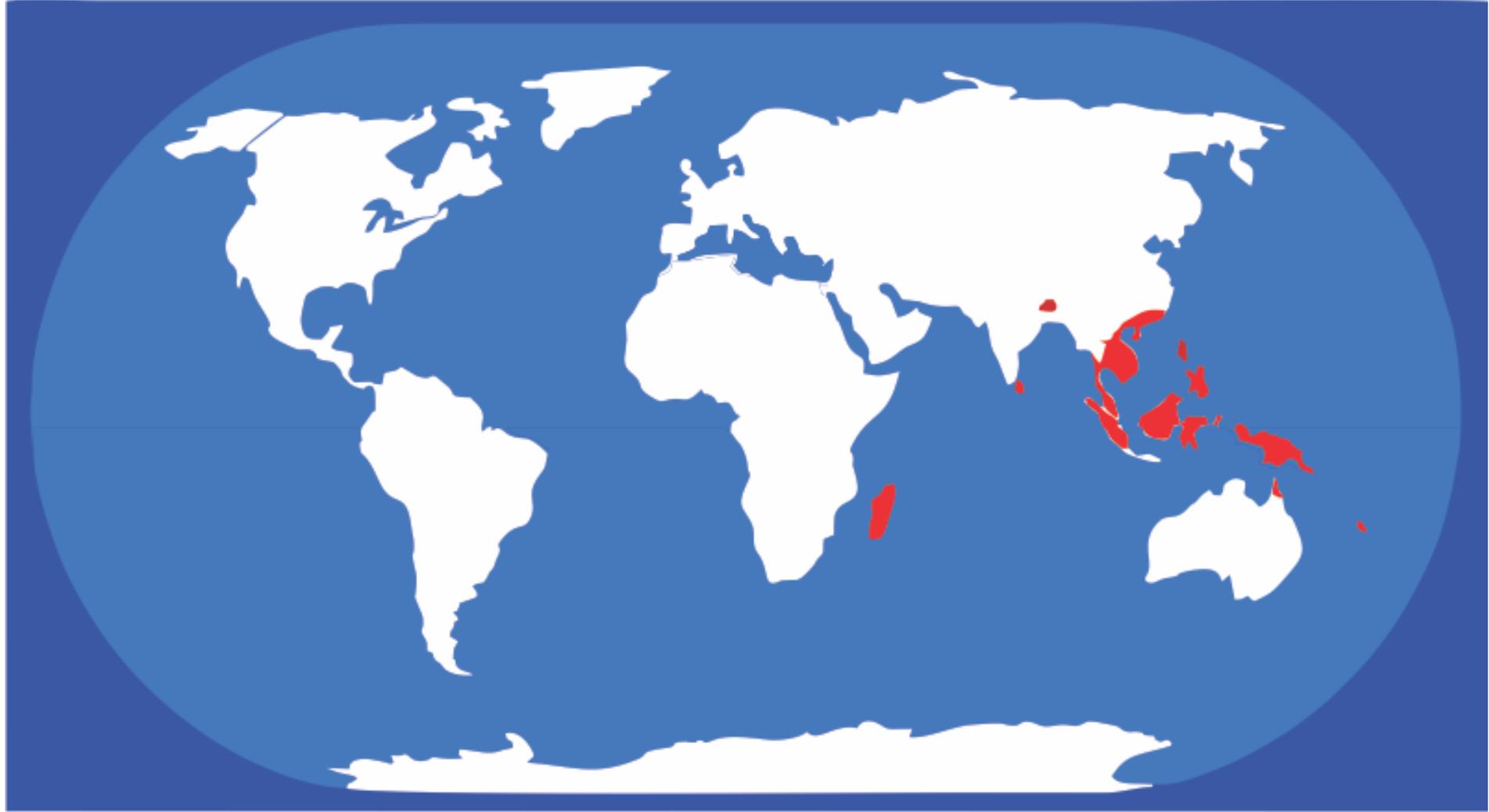


Genus *Darlingtonia*





Genus *Nepenthes*





Nepenthes argentii



Nepenthes raja

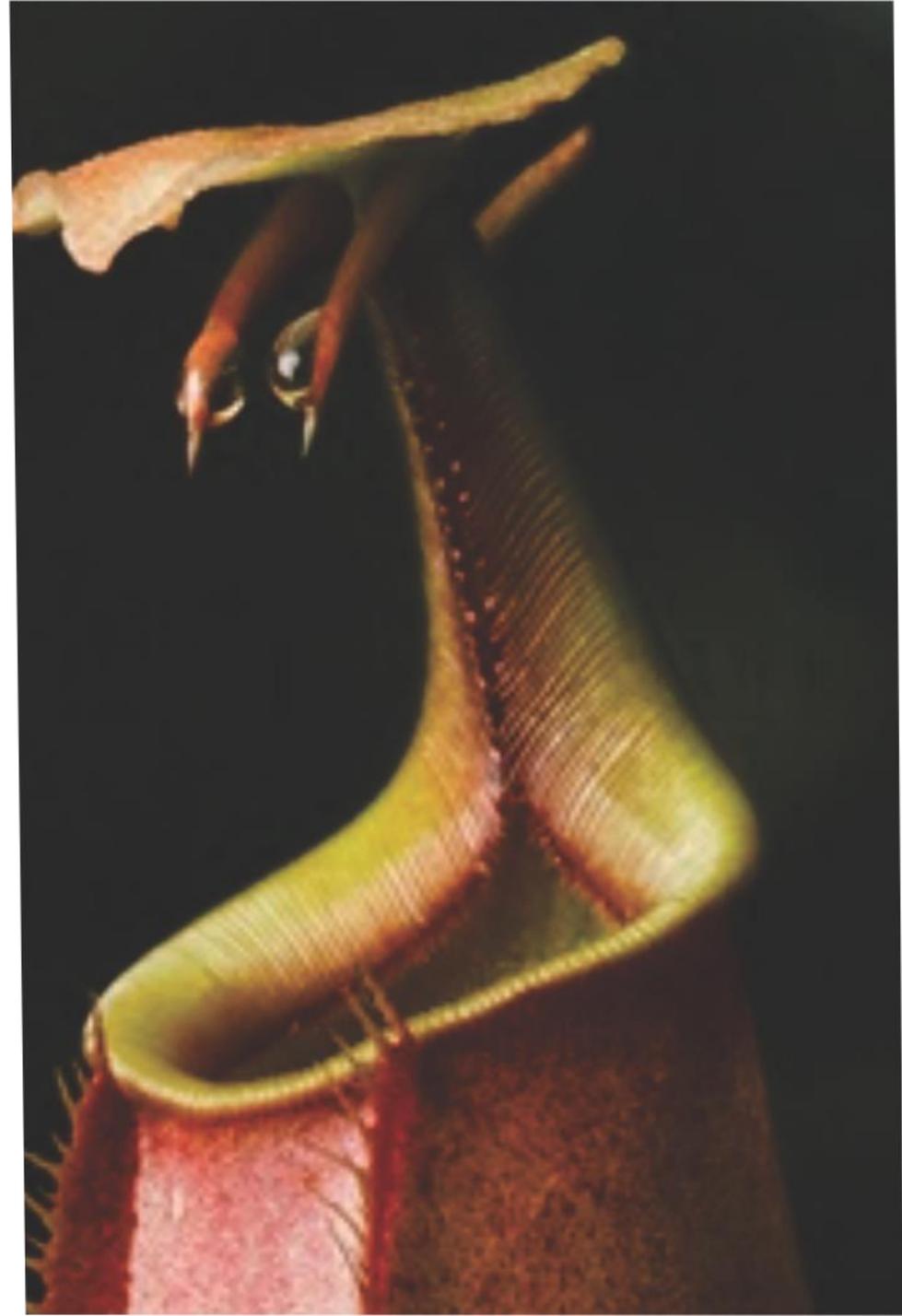


By en:User:NepGrower (en.wikipedia.org) [Public domain], via Wikimedia Commons

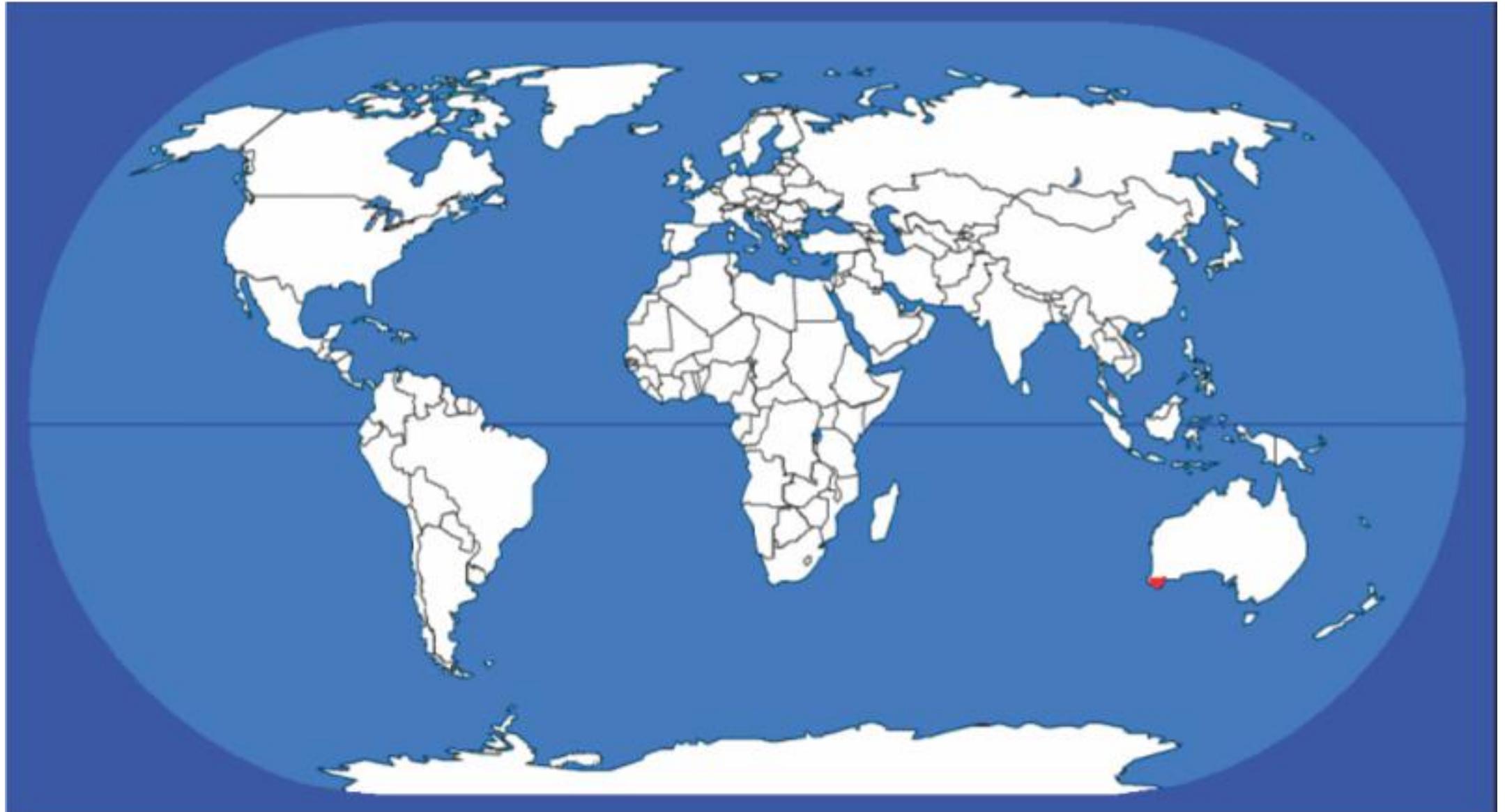
Highland Nepenthes

Nepenthes Villosa

***Nepenthes
bicalcarata***



Genus *Cephalotus*



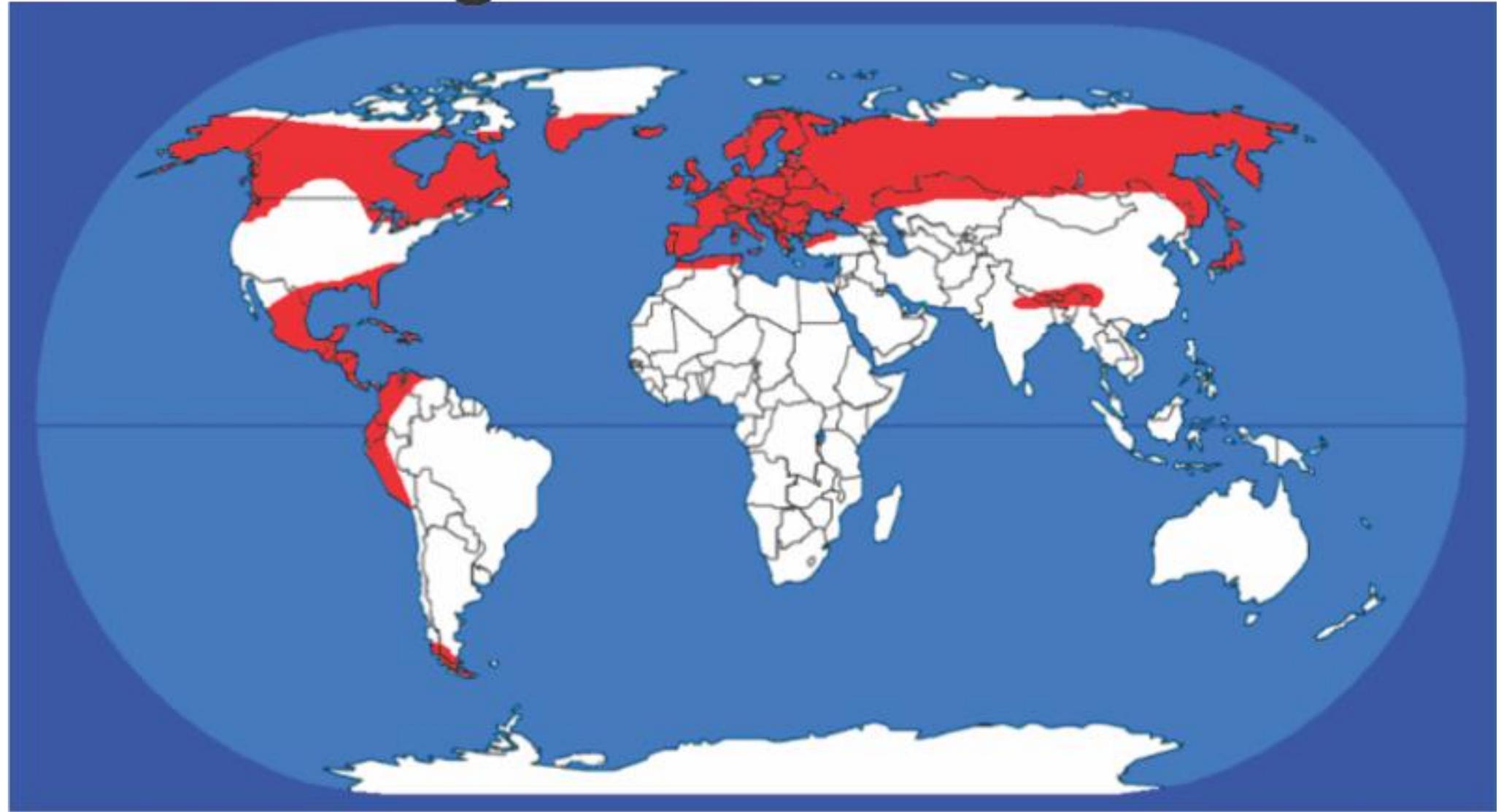
Cephalotus follicularis



Byblis liniflora



Genus *Pinguicula*

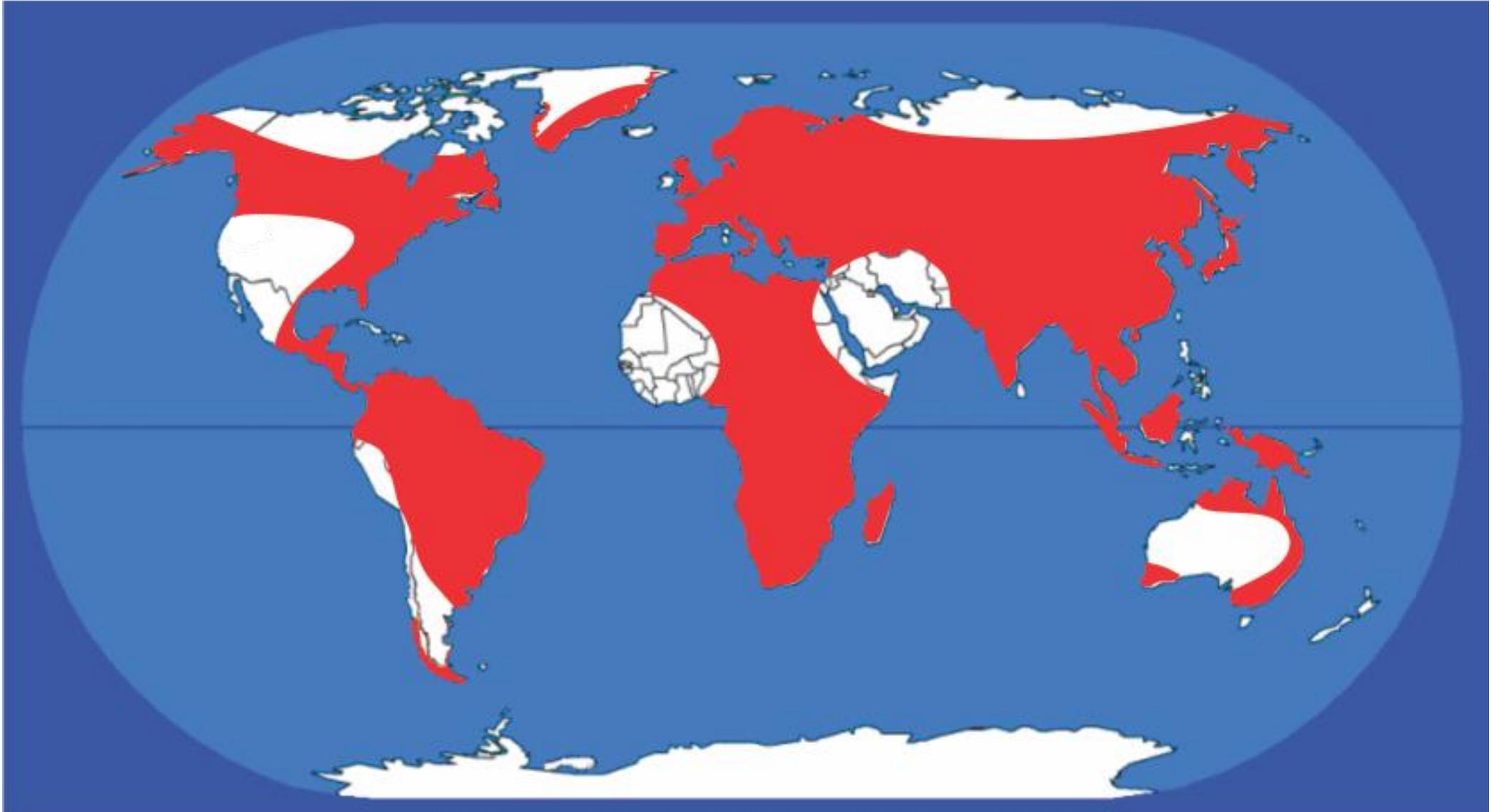




***Pinguicula
gigantea x
laeana***

Butterwort

Genus *Utricularia*



Utricularia spp. Bladderwort



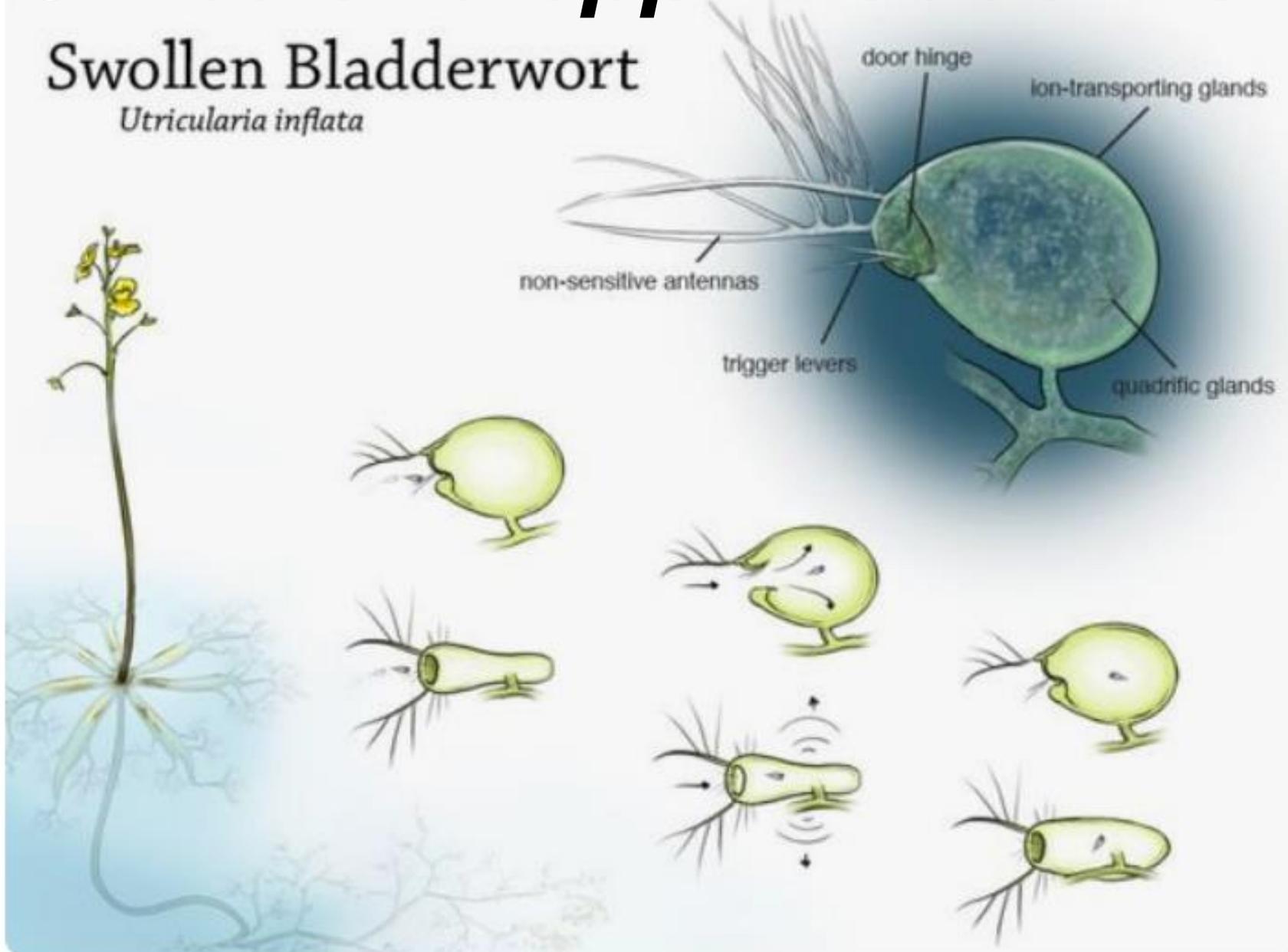
www.shalottteriverswampark.com

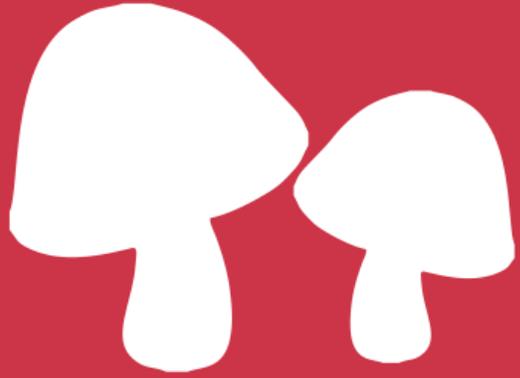


Utricularia spp. Bladderwort

Swollen Bladderwort

Utricularia inflata





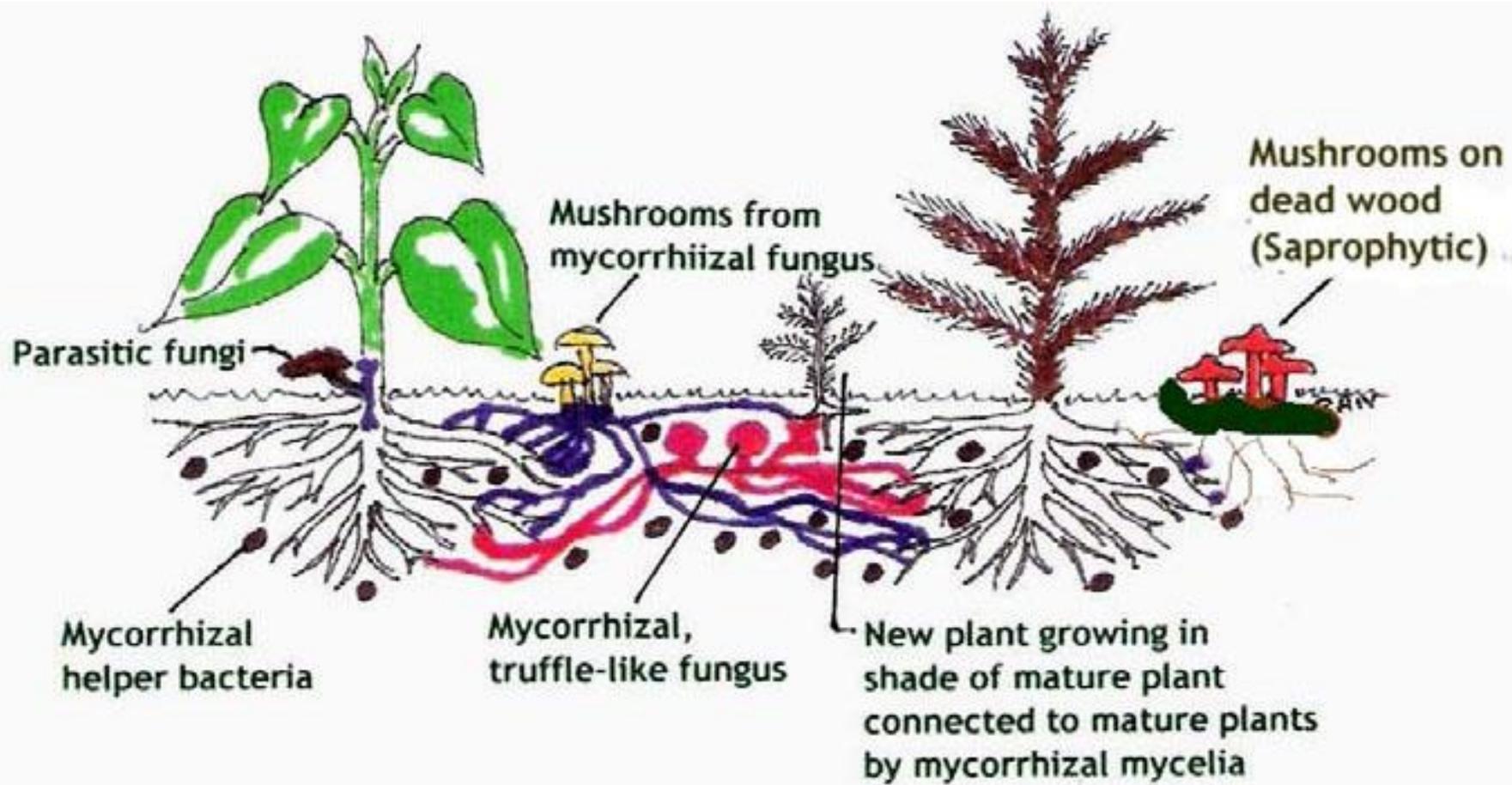
Growing Fungi

If in
doubt....



Throw it out!





Wine Cap/King Stropharia



Nutritional Value of Mushrooms



www.mushroom-appreciation.com

Pearl Oyster Mushroom





If in
doubt....



Throw it out!