

Planting into a Sand bed

- Remove all existing soil from root ball
- Trim back top if the plant is large.
- Plant directly into the sand.
- Top dress with coarse gravel



- Water well and give shade for a few weeks.
- A rock can provide shade and conserve moisture for new plantings
- Water regularly through the first growing season.
- Small amount of slow release fertilizer in the spring.



Crevice Bed

(faces east)

2018

- gneiss type rock
- Lay down fabric
- Dig out soil
- Dump washed builders sand



Place rocks vertical or at slight angle
Follow the same 'strata' line throughout
Leave no air spaces in crevices



Summer dry bulbs:

fritillaria

calochortus ?

brodiaea

Iris bucharica

Lewisia rediviva

other bulbs



- Very sharp drainage
- Forces roots deep; cool root run
- Prevents sudden swings in soil temp
- Successful for the more difficult alpiners



3 sizes of mixed limestone for mulch

Soil Mix for Trough Planting

Hadite Mix (expanded shale)

- Hadite
- Composted Bark



Customize the soil mix



Acidic for ericaceous plants
Vaccinium 'Hamilton'



More humus for
gentians

Daphne Soil for Troughs or Pots

Generally mix about

- 2 parts hadite mix
- 1 part perlite



Lewisia in strawberry jar



- Dry in hot summer and winter
- Moisture and fertilizer in spring and fall. I have used $\frac{1}{4}$ strength Miracle Gro, weekly

Bog bed construction



Partly Sunny East exposure

Build up retaining walls

Line with pond liner

Add $\frac{1}{2}$ peat, $\frac{1}{2}$ sand; minimum of 12" depth

Several inches of soil above water table

2014

.....4 years later (2019)



Blechnum penna-marina
Cornus canadensis
Gaultheria procumbens

Epipactis

Pedicularis seedlings in carex

Houstonia
Shortia
Dwarf rhodies
Calopogon
Sarracenia
Lithodora
Platanthera
Dactylorhiza
Sphagnum
Linnaea borealis
Sabatia
Calluna
Erica
Helonias
Epigea (deep shade)



Water for Bog Beds

- Mineral free water
- Rainwater (pH 7.5)
- well water (pH 8.3)
acidified to (pH 5)

RHIZOPON™

.15 ea

AA WATER SOLUBLE TABLETS

Promotes Rooting Of Plant Cuttings.

Promotes Root Regeneration When

Transplanting Rooted Plants.



03-0622

ACTIVE INGREDIENTS
Indole-3-butyric Acid 20.0%
INERT INGREDIENTS 80.0%

Contents
200 TABLETS
Total Weight 1.76 oz.
Each tablet weighs .008 oz. (250 mg)
Each tablet contains 50 mg IBA

Made in Holland
Exclusive USA Importer:
HORTUS USA Corp, New York NY 10011
EPA REG #63310-8 EPA EST #63397

Easy to ROOT PLANT CUTTINGS by
IMMERSION TOTAL IMMERSION
QUICK DIP SPRAY DRIP DOWN
Easy to TRANSPLANT ROOTED PLANTS by
IMMERSION-ABSORPTION

KEEP OUT OF REACH OF CHILDREN
CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS ON BACK PANEL

Contents
200 TABLETS
Total Weight 1.76 oz.
Each tablet weighs .008 oz. (250 mg)
Each tablet contains 50 mg IBA



Rhizopon TM
1-1/4 cups water
3 tablets Rhizopon TM

This is for semi hard cuttings. Adjust a little stronger for harder or weaker for softer cuttings.





- Spray till leaves are dripping.
Let leaves dry
- Spray with fungicide (Banrot)
Let leaves dry
- Cover with humidity dome.
- Put in shady location or
under lights in basement
- Check weekly for water

For cuttings of grey, fuzzy leaved plants, cover with a open weave flat turned upside down to allow for more ventilation



When your seed arrives:

Sort seed according to proper time to sow.

Following Mother Nature's rules works well.

Tiny, slow growing seed that germinates at 70° can be sown under lights any time.

JAN. Still have time to sow seeds that need outdoor stratification

FEB.-MAR cool germinators (poppies, some re-seeding annuals)

APR- easy, quick germinators

MAY-JUN - early ephemeral seeds-hepatica, corydalis,

JUL - martagon lilies, helleborus

AUG – paeonia, cyclamen

OCT-NOV – seeds needing 3 or more mos. stratification

Spring ephemerals from seed ex.

- short soak in 10% bleach solution
- hydrate in damp paper towel and store in fridge until proper time to sow.

1-27-14	Callianthemum anemonoides SRG 10% Bleach, PT in fridge, plant out 7-1-14
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1-27-14	Hepatica nobilis 'String' SRG 10% Bleach, PT in fridge sow out in JUN.
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Hepatica, spring
ephemerals

Try just storing dry in fridge
till proper planting time, then
soak and plant

Soldanella

Try giving a 10% bleach
soak. Noticed a lot of seeds
grew mold and failed to
germinate



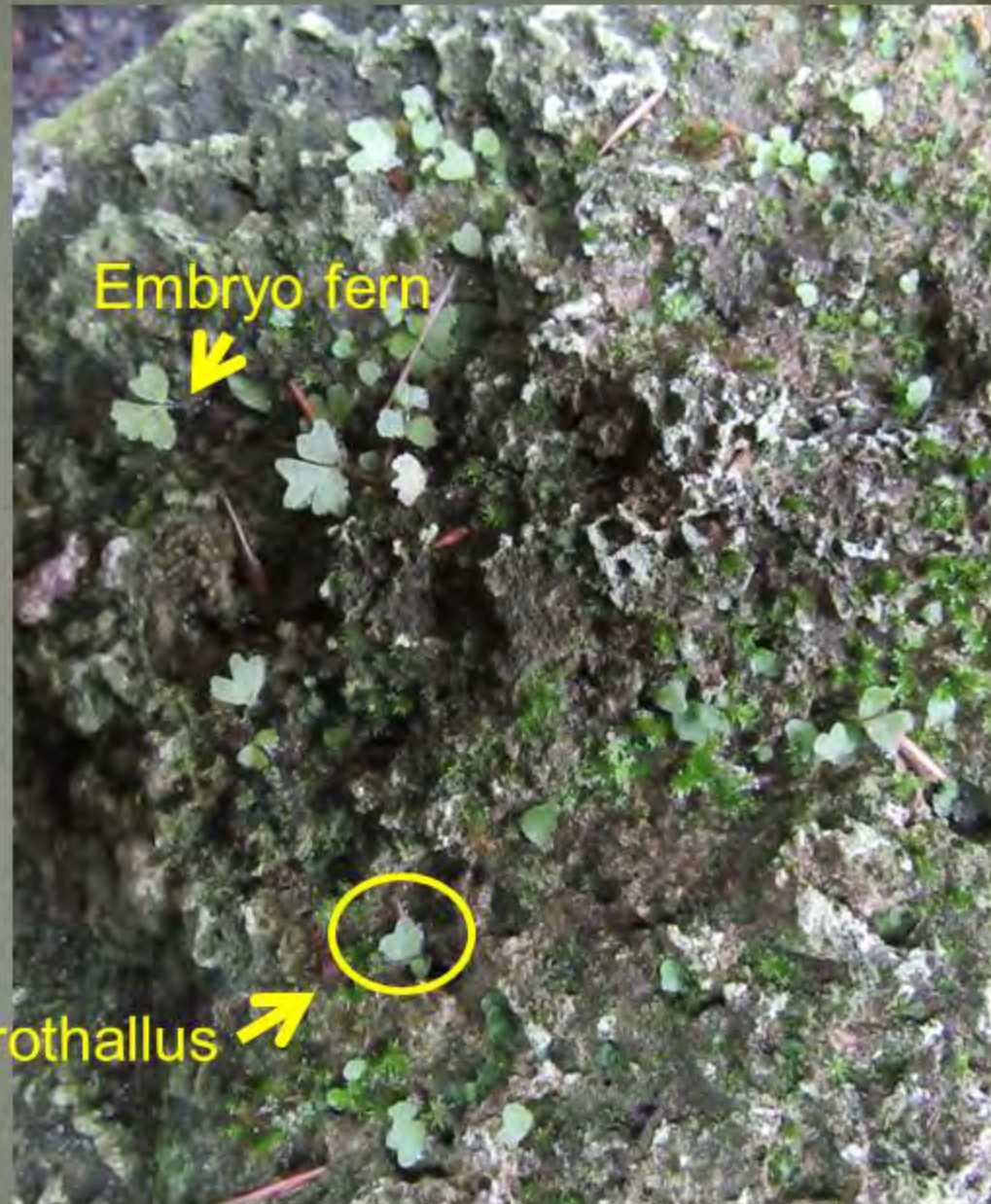


- Collect fronds with mature spores aprox. Mid July
- Place spore side down on white paper and let dry over night
- Released spores are like very fine powder
- Fill clean, clear container with moistened fine seed starting mix (peat/perlite)
- Sterilize in microwave for 10 min
- Try to broadcast a very light dusting of spores over surface
- Mist or bottom water
- Snap lid shut and keep humid



- After several weeks, each spore germinates, then a velvety green mat of small green prothallus (prothalli) forms
- Can prick out and transplant clumps if too thick

- Each spore contains half the number of chromosomes
- Male (antheridia) and female (archegonium) sex organs form on each prothallus
- In the presence of water, male organs release spermatozoa
- Female releases chemicals (malic acid) that attracts spermatozoa, which swims over on a film of moisture to fertilize egg, making a complete set of chromosomes
- Prothallus supplies nutrients to fertilized egg as it grows into embryo fern



- Every gardener needs to experiment for themselves and discover what works in your unique growing conditions.
- Take others tips and advice and modify to work for your situation.
- Ask questions, experiment
- Learn from others mistakes as well as your own.
- My methods will not work 100% for you, but are only a starting place for your experimentation.