

Orchideenvermehrung Ederer

www.orchideenvermehrung.at

Acknowledgment, „mute your microphone“ and slides download

Please mute if you are not speaking!



Thanks to the **CoderDojo Linz** for the meeting room at Zoom!



You can download this presentation at

<https://github.com/tederer/orchideen-aussaat-vortrag>

Who am I?

Name: Thomas Ederer

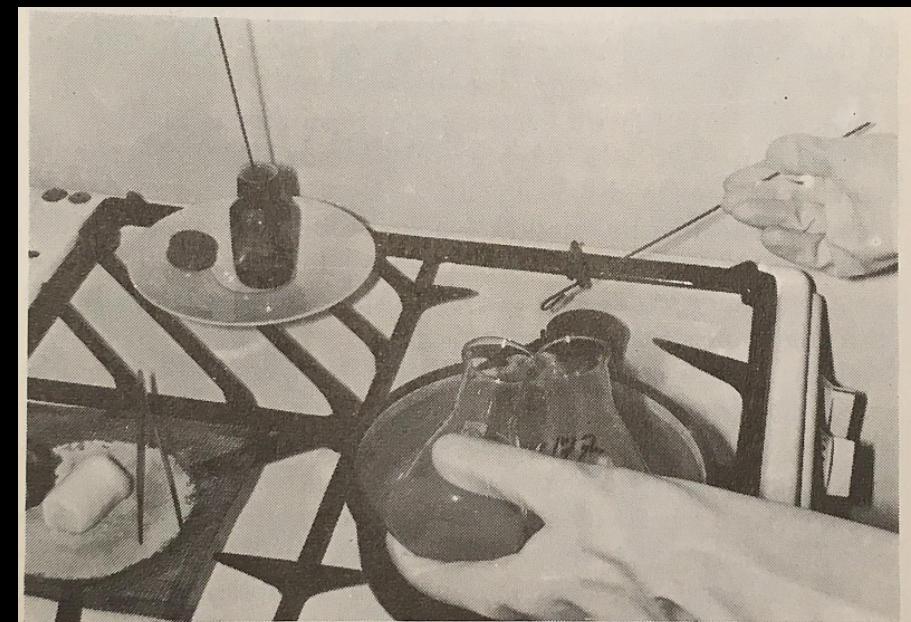
Year of birth: 1975

Education: communications engineer, computer scientist, „orchid propagator“

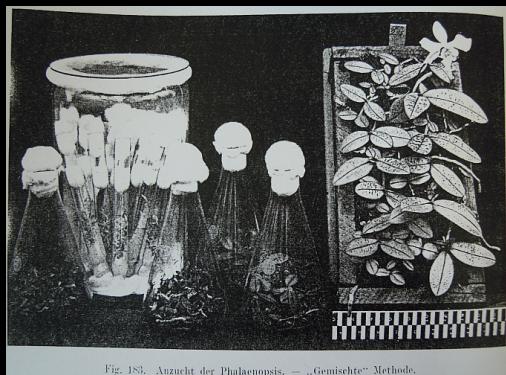
Hobbies: windsurfing, flying radio controlled gliders (F3K), gardening, grafting plants



Where it all started ...



from flowers to seeds



historical seed propagation methods

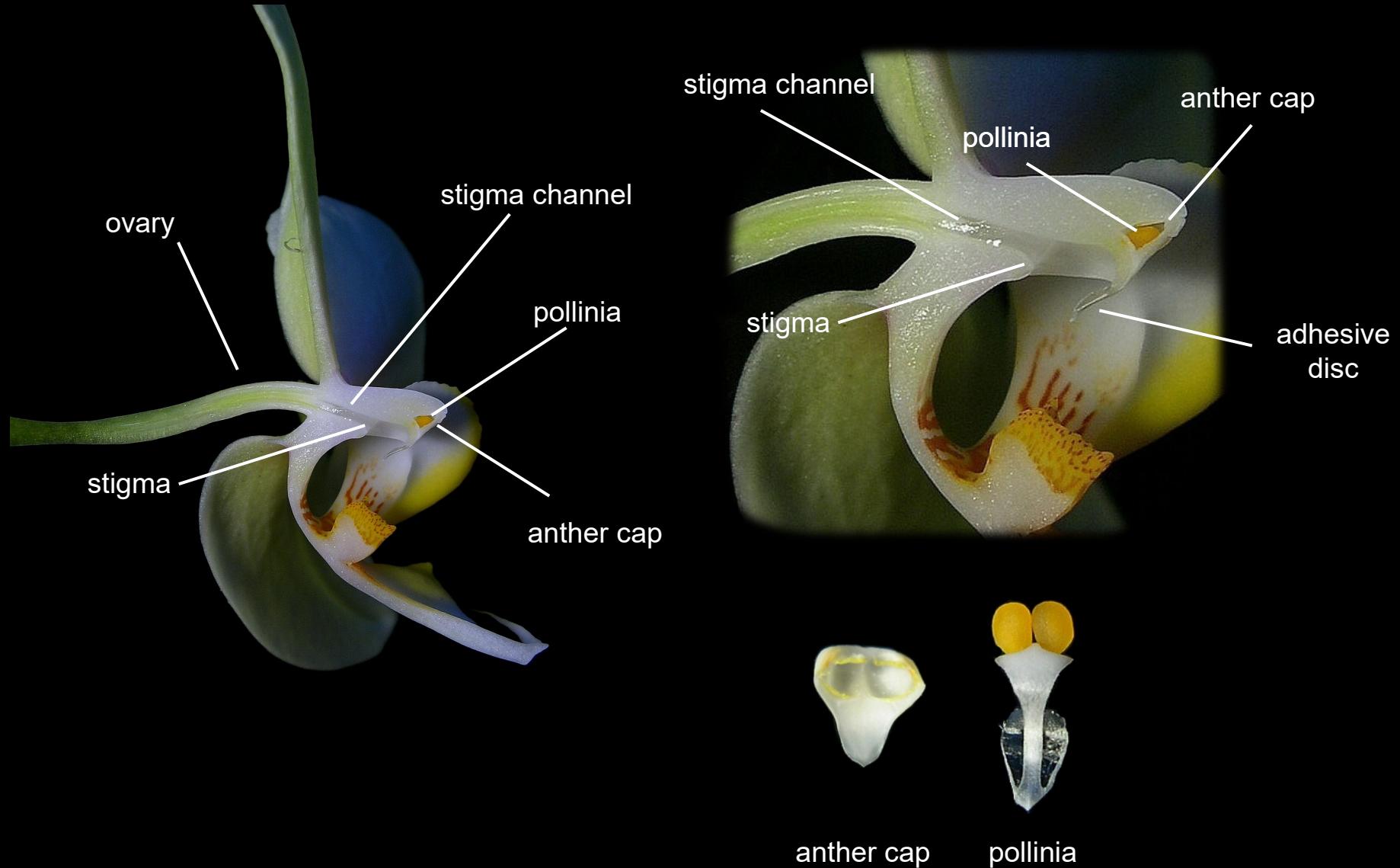


asymbiotic seed germination



acclimatization of seedlings

parts of a *Phalaenopsis* flower

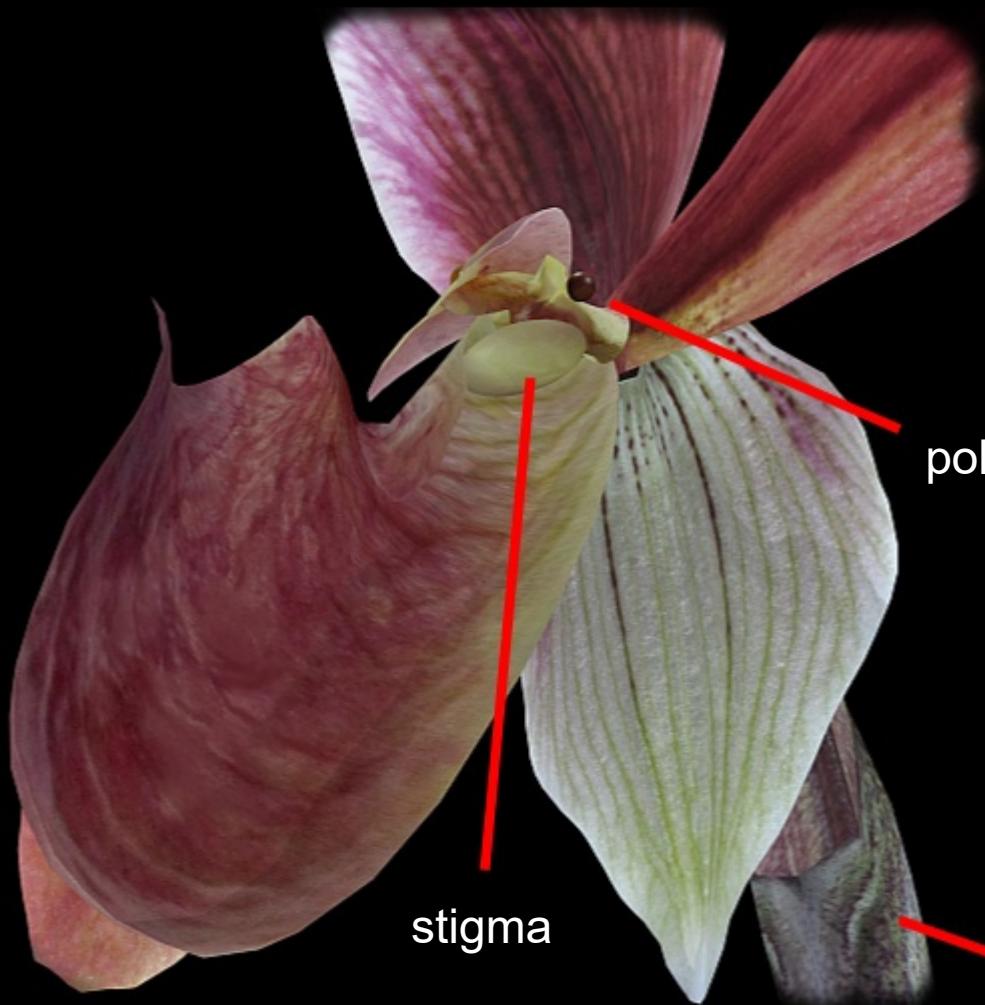


placing the pollinia on the stigma

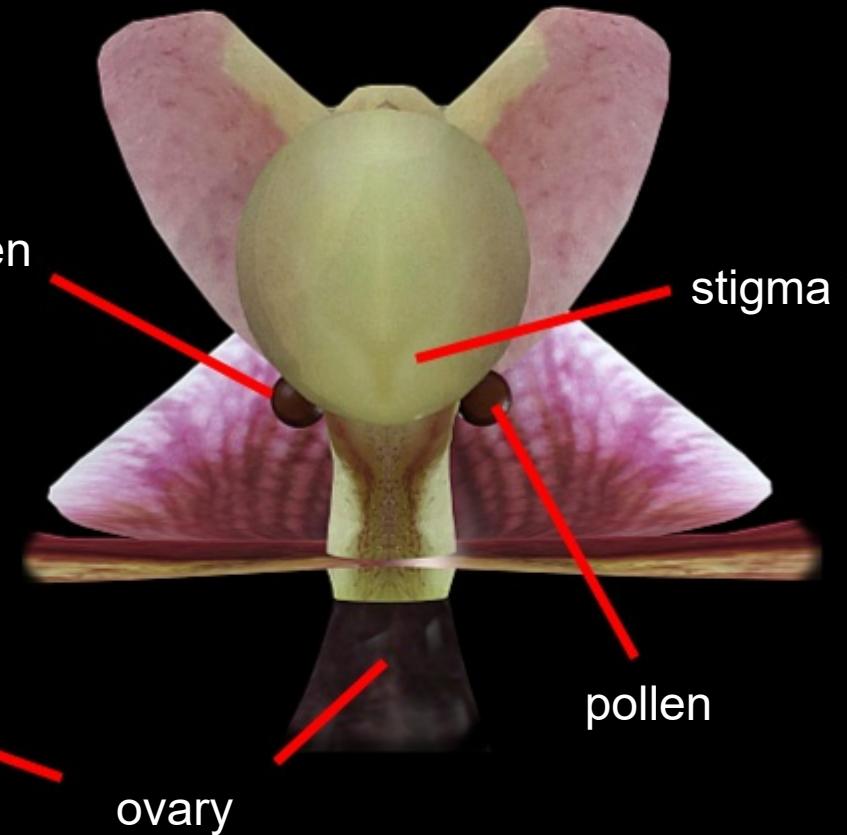


parts of a *Paphiopedilum* flower

side view



column from below



Our 3D-simulation is available [here](#).

developing seed capsule

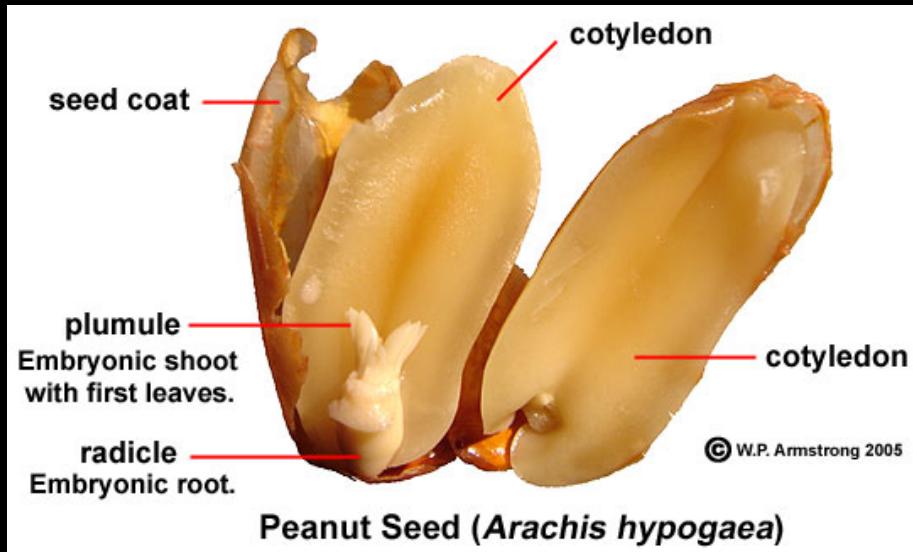


open capsules releasing their seeds



seed structure

peanut

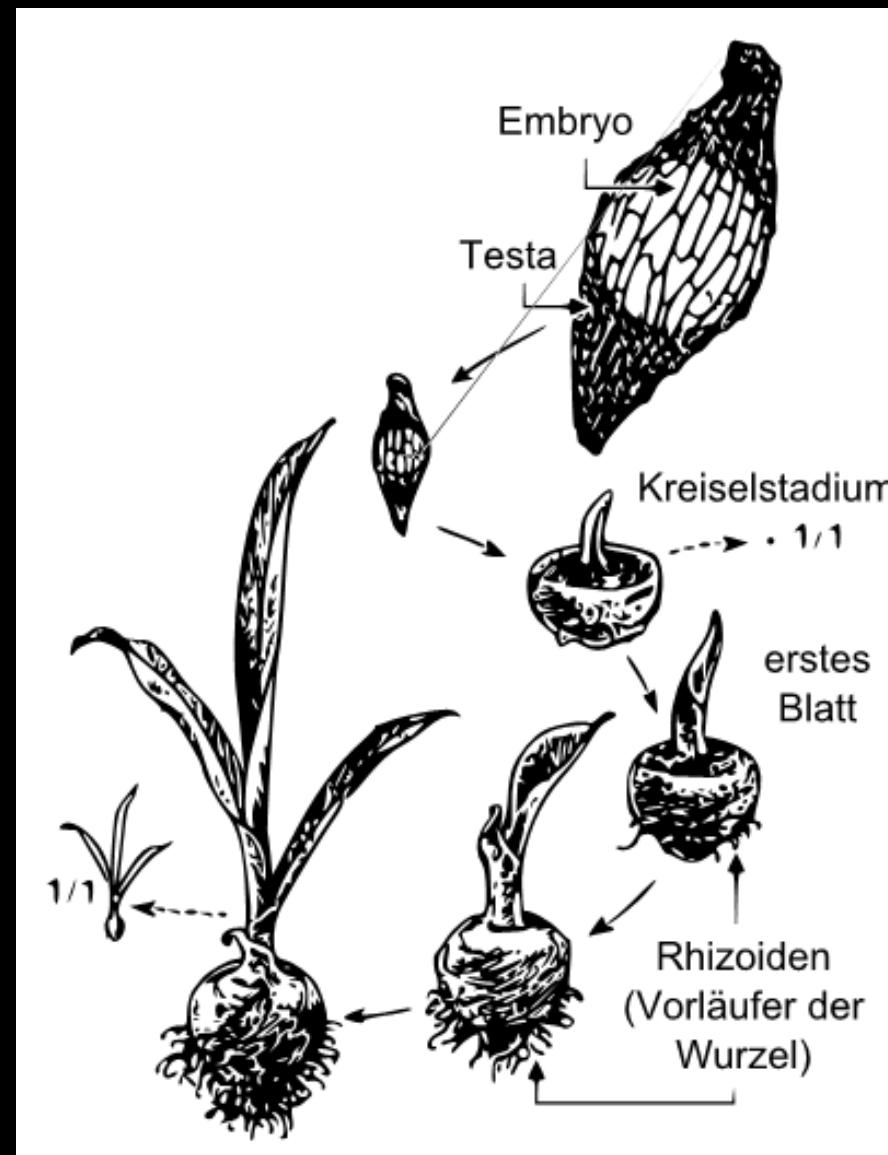


orchid



source: <http://waynesword.palomar.edu/images/pnutem1b.jpg>

development of a seedling



source: „Orchideenkultur“ by Gertrud Fast

In 1832, young plants of *Prescottia plantaginea* were raised in Chiswick (London). Unfortunately there are no details on this. The plants ended up as alcohol preparations.

In 1849 David Moore reported that in the botanical garden of Glasnevin (Dublin) they had succeeded in growing young plants of *Thunia bracteata* and *Epidendrum crassifolium* or *ellipticum* from seeds and making them bloom. The ripe dry seeds were distributed by Mr. Moore in the area of the parent plants on branches and the substrate surface of the pots.

The French botanist Noël Bernard (1874-1911) recognized that orchid seeds need a symbiotic fungus for germination. Building on this knowledge, he developed symbiotic in vitro sowing. Unfortunately, the French researcher died far too early and his German colleague and letter contact Hans Burgeff (1883-1976) had to carry on Bernard's legacy alone. As early as 1911 he published the book "Growing tropical orchids from seeds"

In 1914 Anton Hefka (Schönbrunn, Vienna) published his book "Cattleyen und Laelien", in which he describes his method of sowing on sawdust.

orchid sowing by Anton Hefka in Vienna (1900)



Abb. 2. Vom Keimling bis zur dreijährigen Pflanze, die schon Blumenscheiden zeigt.
(*Laelia tenebrosa* × *Laelio-Cattleya elegans*.)

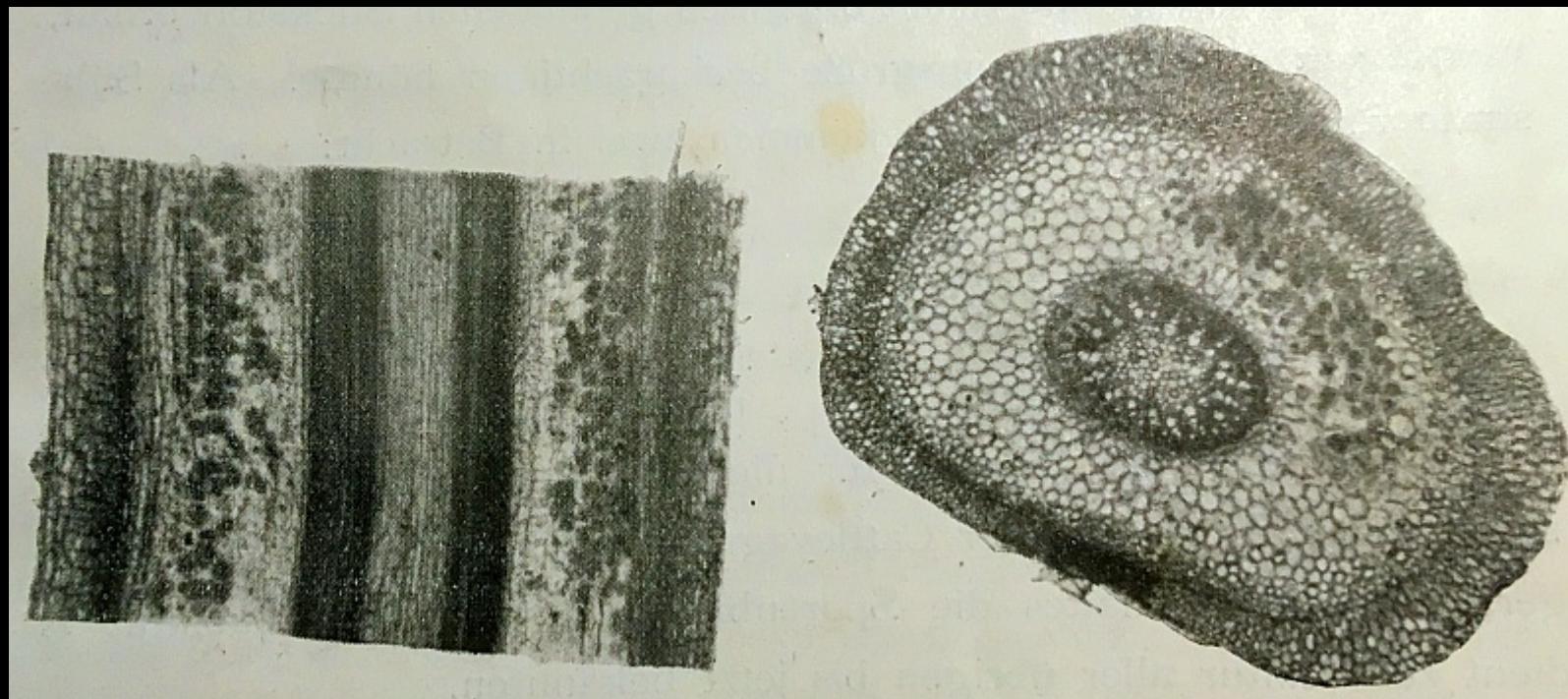
source: „Cattleyen und Laelien“ by Anton Hefka

orchid sowing by Anton Hefka in Vienna (1900)



source: „Cattleyen und Laelien“ by Anton Hefka

symbiotic seed germination by H. Burgeff (1936)



source: "Die Anzucht tropischer Orchideen aus Samen" Dr. Hans Burgeff, 1911

symbiotic seed germination by H. Burgeff (1936)

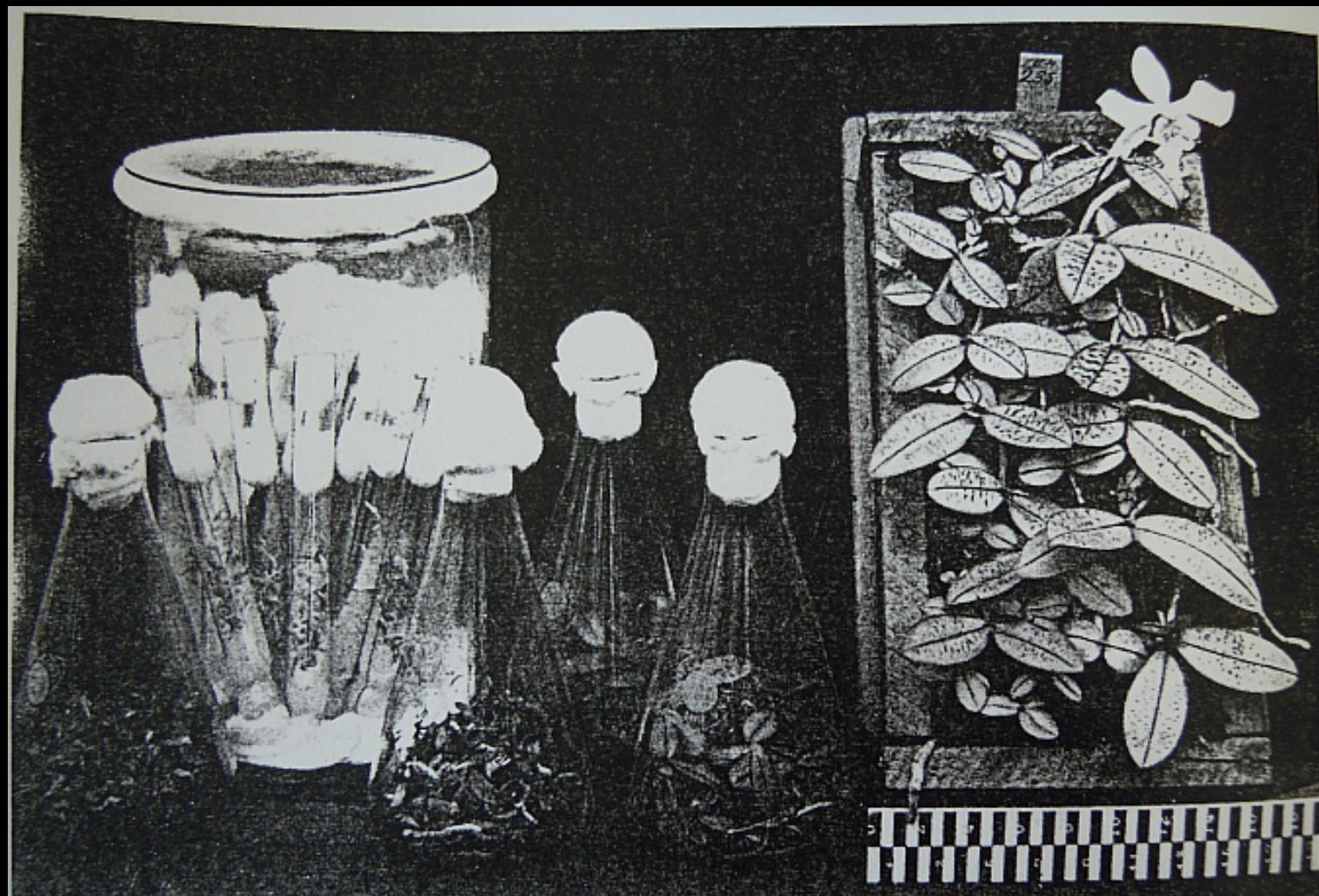
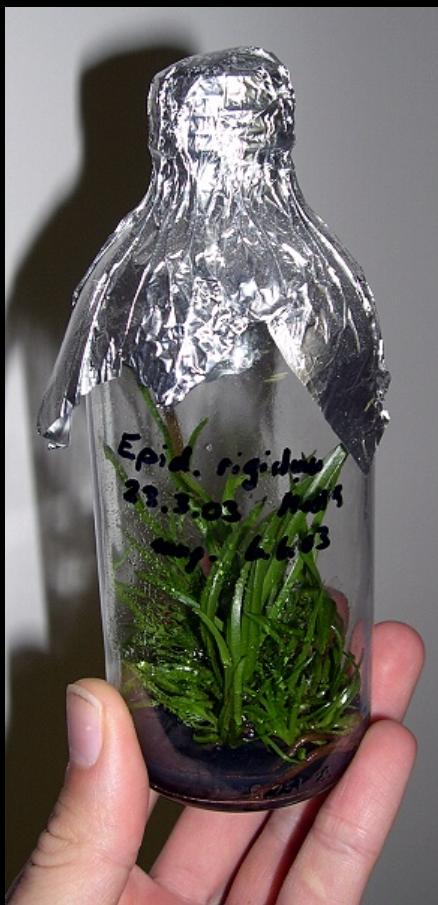


Fig. 183. Anzucht der Phalaenopsis. — „Gemischte“ Methode.

source: „Samenkeimung der Orchideen“ by H. Burgeff

asymbiotic seed germination

„in vitro“ stands for „in a jar“ or „in a closed environment“.



contaminations



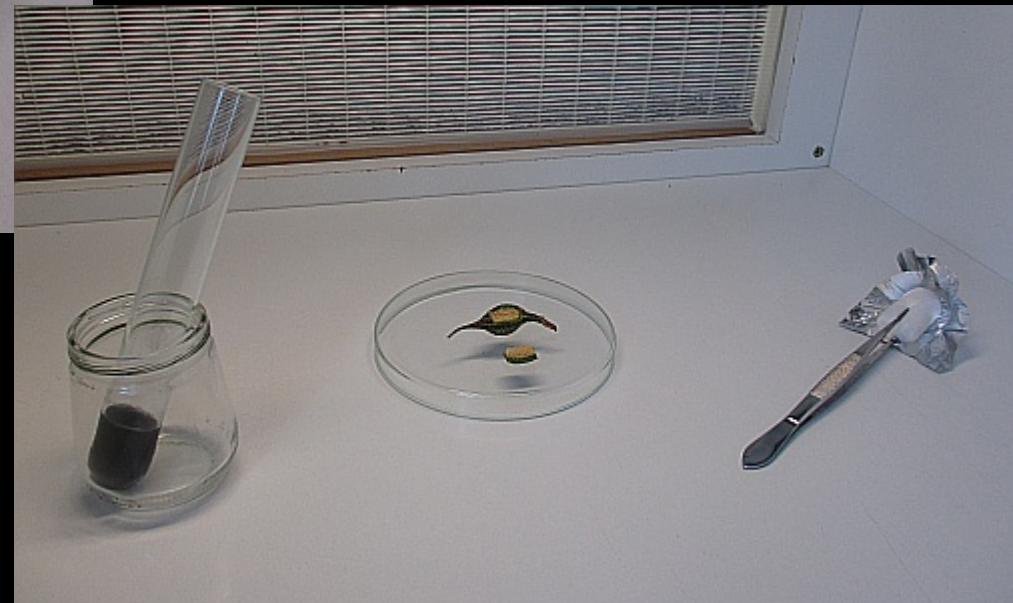
media preparation



aseptic sowing areas

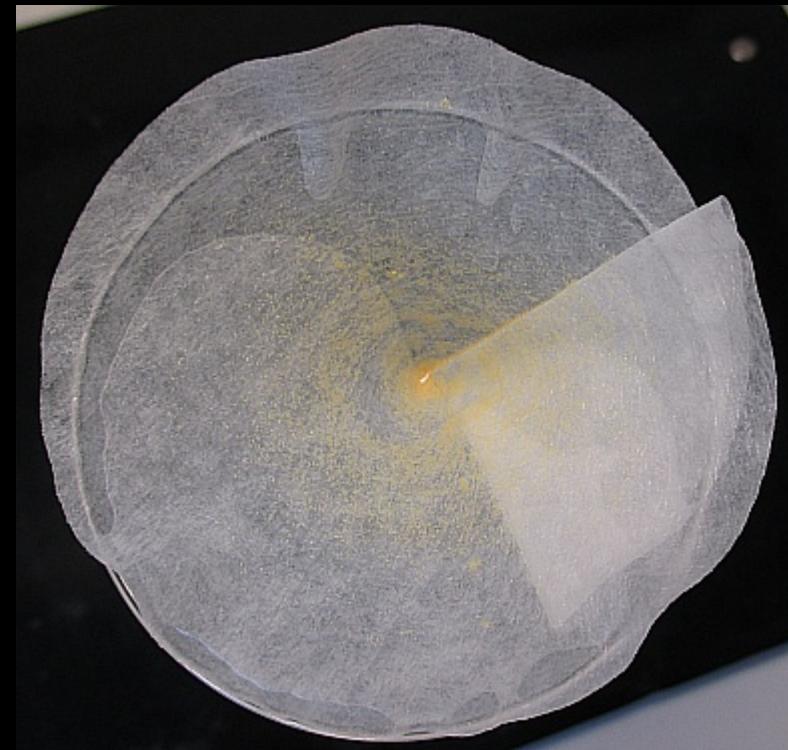


sowing from green capsules



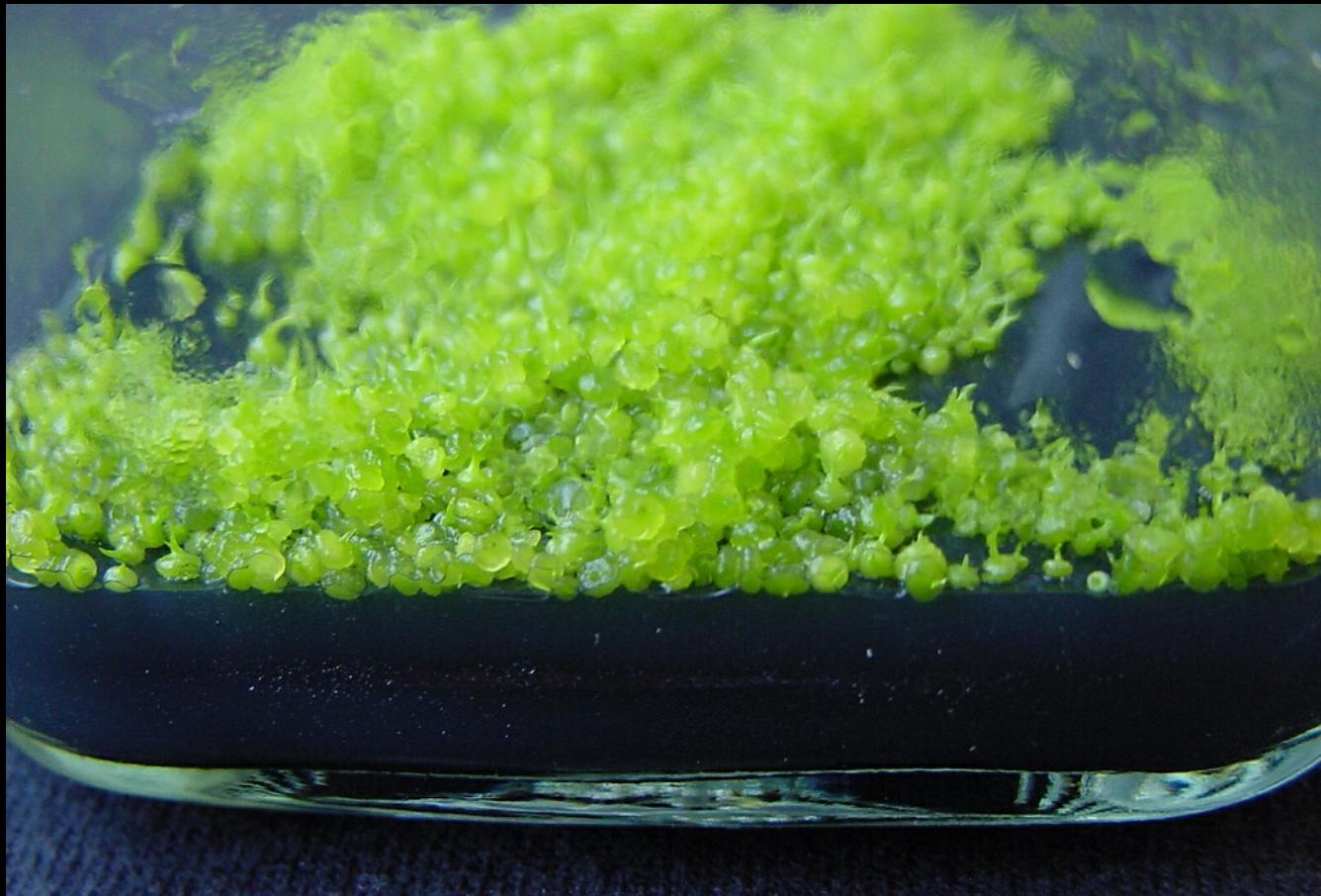
disinfectant: ~1% hypochlorite solution for 15 minutes

sowing dry seeds



disinfectant: 0,14% hypochlorite solution for 10 minutes

protocorms



protocorms with first leaves



replated seedlings



seedlings big enough for deflasking



Caularthon bicornutum

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seedlings in community pots



seedlings after a few months



Thanks for your participation!

Questions?