# Sympoetic Thinking Examples



#### Lactobacillus acidophilus

Mutualistic symbiotic relationship with humans. Found in the human body, and in dairy, meat, plants and fermented products. Studies show beneficial effects on human gut, immune and mental health

and antipathogenic effects on harmful (to humans) micro-organisms. Situated: all over the world Lifecycle: 12 hours Seven generations: 3 days, 12 hours

#### **EXTERNAL - NEAR**



#### Early purple orchid

Slow to colonise and an indicator of ancient woodlands.

Thought to rely on native bees and moths to pollinate. Does not provide nectar as reward but looks similar to nectar providing arjuna reptans.

Situated: Europe, North Africa and the Middle East. Lifecycle: 13 years Seven generations: 91

## **EXTERNAL - NATIONAL**



#### Eurasian Pine Marten

Woodland dwelling omnivores, their return to parts of the UK may make room for red squirrels, as they tend to be more successful at hunting greys – possibly due to co-evolution with reds.

Situated: Scotland and Northern parts of the UK, Wales and Ireland, Europe, Asia Minor, Caucasus, and parts the Middle East of the Middle East. Lifecycle: 11 years Seven generations: 77 years

## EXTERNAL - GLOBAL



#### Swift

Swifts migrate 3,400 miles twice a year from Africa to Europe. They rarely touch the ground and eat flying insects and airborne spiders.

Situated: in all continents except Antarctica, the far North, large deserts or oceanic islands. Lifecycle: 20 years Seven generations: 140 years

#### Sympoetic Making Prompts

What does it need to be healthy?

How does it communicate?

Does it live with other beings?

How long does it live for?

Is it a parent/child? Why?

What do we know about it not in relation to humans?

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## INTERNAL

NA.

#### Candida Albicans

A true fungal symbiont of humans. with a variety of symbiotic relationships with humans, including mutual (through pathogen antagonism, commensal (homeostatis) or parasitic (dysbiosis and disease), depending on various factors, such as the human host's immune system Situated: all over the world.

Lifecvcle: 114 hours Seven generations: 4 days, 18 hours

#### EXTERNAL - NEAR



#### Chalk blue butterfly

The sole foodplant for caterpillars is Horseshoe Vetch. The foodplant and butterfly are restricted to chalk and limestone grassland.

Situated: in Southern England, Europe and central Asia. Lifecycle: 1 month Seven generations: 7 months

### **EXTERNAL - NATIONAL**



**Eurasian Beaver** 

Known as an ecosystem engineer. beavers are known for creating wetland habitat that benefits some beings (but may harm others). Situated: Widespread but fragmented

populations throughout Europe and Asia. Recently reintroduced to the UK after a 300 year absence. Lifecycle: 8 years Seven generations: 56 years

## **EXTERNAL - GLOBAL**





#### Cyanobacteria

Known as "Architects of earth's atmosphere" and thought to be the first oxygen producing species, they dramatically changed the composition of Earth's life forms and led to the near extinction of anaerobic organisms. An occasional symbiotic partner of lichens, some are beneficial to humans or used for a variety of purposes including dyes and biofuels, others can cause disease Situated: all over the world. Lifecycle: 5 d Seven generations: 35 days

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# Image References:

Being, Form or Force	Picture Reference	Description Reference
Lactobacillus acidophilus	https://www.optibacprobiotics.com/professionals/probiotics- database/lactobacillus/lactobacillus- acidophilus/lactobacillus-acidophilus-rosell-52	https://www.optibacprobiotics.com/professionals/probiotics- database/lactobacillus/lactobacillus-acidophilus/lactobacillus- acidophilus-rosell-52 https://academic.oup.com/femsle/article/349/2/77/533643 ***research lifespan and generation span***
Candida albicans	Photo by María Mercedes Panizo, https://www.sciencedirect.com/topics/biochemistry- genetics-and-molecular-biology/candida-dubliniensis	https://www.sciencedirect.com/science/article/pii/S1369527416301813 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2773528/
Early purple orchid	Photo by author	http://www.hardyorchidsociety.org.uk/hos%201012/orchidphotos/orchis- mascula/jQueryGallery1/o-mascula.html https://cronodon.com/NatureTech/orchis-mascula.html
Chalk blue butterfly	Photo by author	https://en.wikipedia.org/wiki/Chalkhill_blue https://butterfly-conservation.org/butterflies/chalk-hill-blue https://www.butterflyidentification.com/butterfly-facts/how-long-do- butterflies-live
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