

Lichen Study Guide:

- ① Lichens are made up of a fungus and an algae. The fungus provides structure and the algae provides food through photosynthesis.

WHAT IF...

- Algae lost the ability to photosynthesize?
(the lichen needs another source of food)
- The lichen were living in total darkness?
(it'll die due to lack of food)

② What would happen if we increased the sensitivity of one of the lichens?

(if pollution is present, that lichen will suffer)

How do you think people found out that Lobaria is sensitive to pollution?

(people noticed that some lichens don't grow in areas that are polluted)

③ What would happen if you grew lichens with completely pure water?
(They might get fewer or no trace minerals)

What would happen if you grew lichens in an area where it was never light and wet at the same time?
(It might grow slower if it didn't have water and light together)

⑤ What would happen if one algae tried to invade another lichen?

(The lichen might not do as well because the two algae will compete for sunlight)

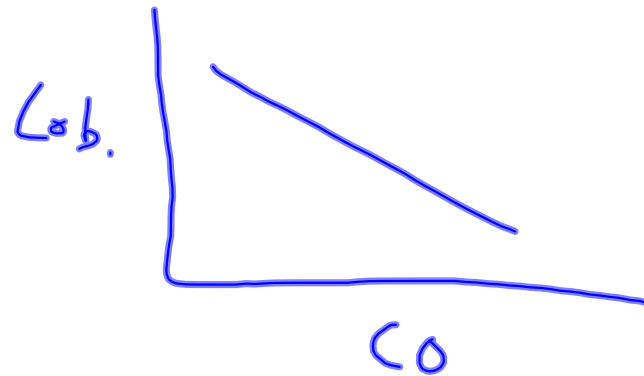
What might be different if the algae were a parasite in a lichen— if it didn't do the fungus any good?

(the fungus might constantly be evolving defenses against the algae; the algae would try to fight them off)

⑥ What would the graph mean if the trend was horizontal?

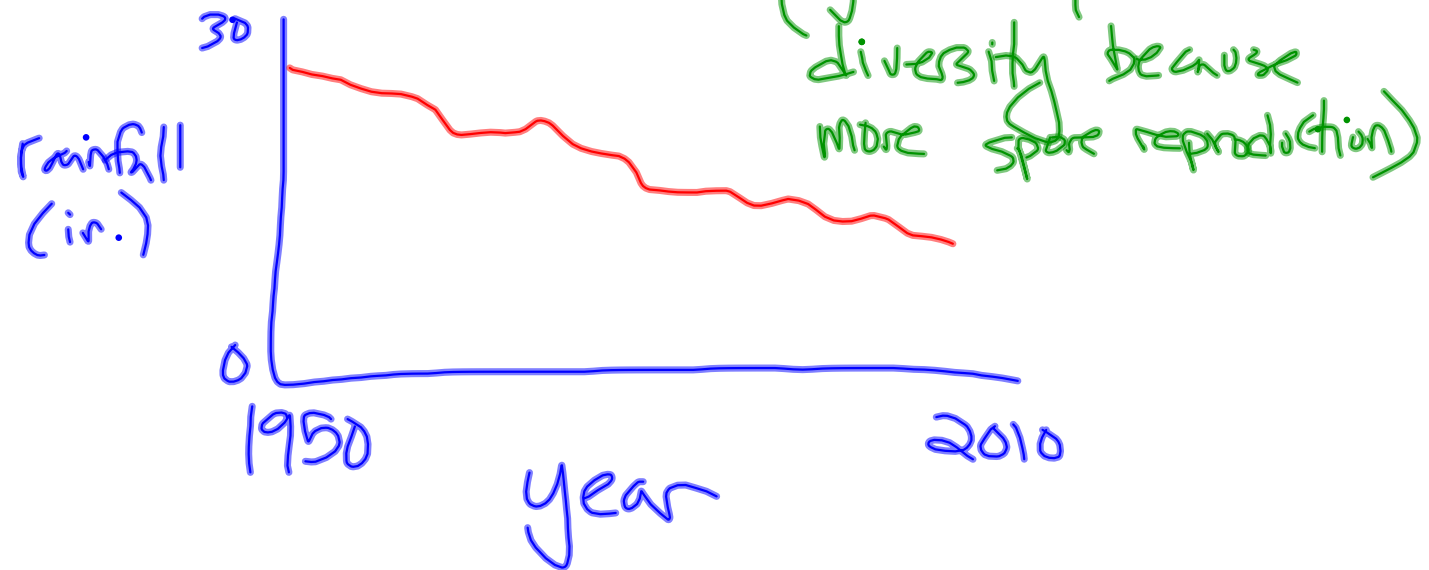
(Lobaria isn't affected by the amount of SO_2)

Make a graph showing that Lobaria decreases as CO increases



⑦

What do you think will happen to the genetic diversity of the lichens living in this area:



④ Be aware that lichens have human uses as well as ecological functions...