Time for new plagues
Climate Crisis

Right after land use change, ***the climate crisis is the second greatest challenge to biodiversity.***

The causes can be ***floods, storms*** *and* ***droughts,*** *which are caused by extreme events and rising temperatures.*
This allows ***some insect species to spread further*** *and* ***some species to decline further.***
Increases *in some insect species can be attributed to the* ***climate crisis,*** *while* ***declines*** *are much more* ***difficult to analyze.***
Statements about the impact of the climate crisis are mostly based on forecasts and experimental studies.

brown ant on green leaf in macro photography photo – Free Kerala Image on Unsplash

Species and their habitats

So ***some*** *insect species* ***respond positively*** *and* ***others negatively*** *to the climate crisis.*
The ***ecological niche*** *of each animal is responsible for this.*
For example, the ***habitats, weather conditions,*** *and* ***feeding feathers,*** *as well as* ***food****, must match.*

Many species do ***not manage to migrate*** *due to islanding and habitat loss, often caused by agricultural use.*

These benefits have ***heat-loving insects, mobile insect*** *species that colonize multiple habitats. These are the* ***habitat generals.***
Insects that ***need damp-wet and cool weather*** *and are* ***not so mobile*** *and therefore probably* ***cannot change habitat*** *are the species which probably will die.*

The University of Seattle in the USA has calculated that the ***harvests of rice, corn and wheat,*** *as a result of the changed population,* ***fall by 10 to 25 percent*** *per one degree of global warming.*
These represent 40% of the world's staple foods and ***accordingly this figure is extremely alarming.***

Move with the times

Some species also manage to adapt to the environment and thus climate change.

→ *The* ***female razorback*** *actually has* ***shorter wings*** *than the male, but in order to travel long distances to find a new habitat, they* ***now*** *have often wings of the* ***same length as the male.***

- *Due to feeding damage by insects we have a crop loss of 1,000 tons, at 2 degrees Celsius.*
- *Insect damage to the world's three most important cereals may increase by around 50 million tons as a result of the climate crisis.*
- *If* ***pollinator insects migrate****, the* ***harvest fails.*** *Entire fields would no longer thrive.*
- *With a global warming of 1.5 degrees Celsius, 6% of insects lose their habitat by half. By Vertrebrates 4% and plants 8%.*
- *With a global warming of 2 degrees Celsius it would increase by insects at 18% by insects, 16% by plants and 8% by vertrebates.*

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Sources: Insektenatlas S. 22-23, ScienceMag – The projected effect on insects, vertebrates, and plants of limiting global warming to 1.5°C rather than 2°C, Dr. Christian Hof – Biodiversität und Klima-Forschungszentrum Frankfurt /Main