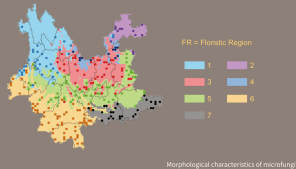


Biogeography of microfungi in Yunnan

气候变化对云南微型真菌生物地理分布的影响

Main objectives of this study are to deepen our understanding of the taxonomic systematics of plants associated with aboveground microfungi, accurately map the biogeography of microfungal groups in Yunnan Province, and use this information to investigate how microfungi will be affected by climate change.



Tea pathogens

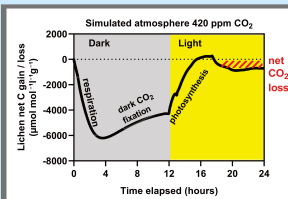
茶叶病原菌

Changing climatic conditions will affect many crops in the near future. Among them, perennial crops grown at established immovable plantations are particularly vulnerable. Fungal pathogens can cause diseases in tea plants, and in our research, we predict how future climatic conditions may exert different effects on tea and its associated fungal pathogens. In addition, fungal tea pathogens will be identified based on morphology, phylogeny and pathogenicity testing.



Lichen's impact on global carbon budget 地衣对全球碳收支的影响

In the face of climate change, many species are shifting geographic ranges to adapt to changing conditions. Lichen, however, disperses slowly and requires host trees to shift before it can follow. Epiphytic lichen also provides 97% of the winter diet for Yunnan's endangered snub-nosed monkey. Determining whether lichen become net carbon sources or sinks under changing climate conditions will impact the global carbon budget. Some lichen can take up carbon in the dark via nitrogenase activity, and nitrogen pollution is anticipated to affect nitrogenase activity.



Agriculture and livestock 气候变化对农业和畜牧业的影响

Climate change poses major challenges both globally and regionally. In Yunnan Province, China, predicted changes in the climate will necessitate drastic shifts in cultivated crops to avoid agricultural losses. We have modelled which crop species will be suitable under future climate scenarios to increase the resilience of farmers and enable policymakers to make smart decisions. In the north of China, rising heat stress threatens to negatively affect milk production. Researchers have developed a statistical model to identify which regions will be affected most and potential relocation sites to mitigate potential production losses.

