

# EMERGING THREATS TO FUNGI

*(and All Life)*

## FIRE

Global warming elevates fire risk. Fires in Australia, Amazonia, and California burned an unprecedented >12.4 million acres of forest in 2019.

## STORM INTENSITY

Climate changes bring stronger, more frequent storms, tornadoes and hurricanes; more fire-igniting lightening; and damaging flooding.

## GLOBAL WARMING

Arctic sea ice is declining precipitously, arctic-alpine and other cold-adapted communities are contracting, while sea-level rise threatens coastal ecosystems.

## INTERACTION DISRUPTION

Climate change is affecting ranges globally. Ants are invading and consuming wildlife in cloud forest never before exposed to these marauders.

## INTRODUCED SPECIES

Global trade is accelerating the movement of pernicious plants, animals, and pathogens to new regions—often with devastating consequences.

## POLLUTION

Chemical, light, and noise pollution of water, air, and soil are impacting plant and animal life worldwide.

## URBANIZATION

Our global population of 7.8 billion, spread planet-wide, comes at great cost to biodiversity and wildlands. Already, over 500 vertebrates have been driven to extinction.

## AGRICULTURAL INTENSIFICATION

Industrialized agriculture, with its attendant increases in scale, monoculturalization, nutrient input, and pesticide use, is becoming increasingly nature unfriendly.

## INSECTICIDES

Modern, industrialized agriculture, with its increasing reliance on chemical insecticides, has led to chronic contamination of wild lands—and impacts to non-target species.

## DROUGHTS

Periods with diminished precipitation are becoming longer, more frequent, and warmer, with grave consequences for all life.

## DEFORESTATION

The tropics lost 29.4 million acres of forest in 2019, mostly to agriculture.

## NITRIFICATION

Fertilizer and products of fossil fuels combustion are nitrifying the planet, challenging the biotas adapted to low-nutrient conditions.

