

Carbon Footprint Club's Monthly

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"Deo gratiam habeamus"

Let us be grateful to God



Species of the Month



By Umeshsrinivasan - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=15157811>

Binomial Name

Raorchestes luteolus

(Kuramoto & Joshy, 2003)

Conservation Status

- **Data Deficient IUCN 3.1**
- **Vulnerable (VU) (Previously)**

Raorchestes luteolus (sometimes known as **Coorg yellow bush frog**) is a species of frog in the Rhacophoridae family. It is endemic to the Western Ghats, India, where it is only known from the state of Karnataka. It is also known from the Shimoga district in the Sharavathi basin where it was described as a new species, *Philautus neelanethrus*, but this is now considered to be a junior synonym of *Raorchestes luteolus*. *Raorchestes luteolus* is a small frog, males measuring 24–29 mm (0.94–1.14 in) in snout-vent length.

Major Threat

The threats to this species at the specific collection localities are not known. There is an ongoing loss of natural habitats due to anthropic disturbance over much of the Western Ghats, and this might be a threat.

Monthly Article:

Air Pollution in China and India

Air pollution has become a major issue in China, and poses a threat to Chinese public health. Coal combustion generates particulate matter also known as "PM". Currently, Beijing is suffering from PM 2.5, which is a particulate matter with diameter of 2.5 micrometers or less. According to the U.S. Environmental Protection Agency, such fine particles can cause asthma, bronchitis, and acute and chronic respiratory symptoms such as shortness of breath and painful breathing, and may also lead to premature death. Measurements in January 2013 showed that levels of air pollution, as measured by the density of particulate matter smaller than 2.5 micrometers in size, were beyond index – higher than the maximum 755 μg the US Embassy's equipment can measure.



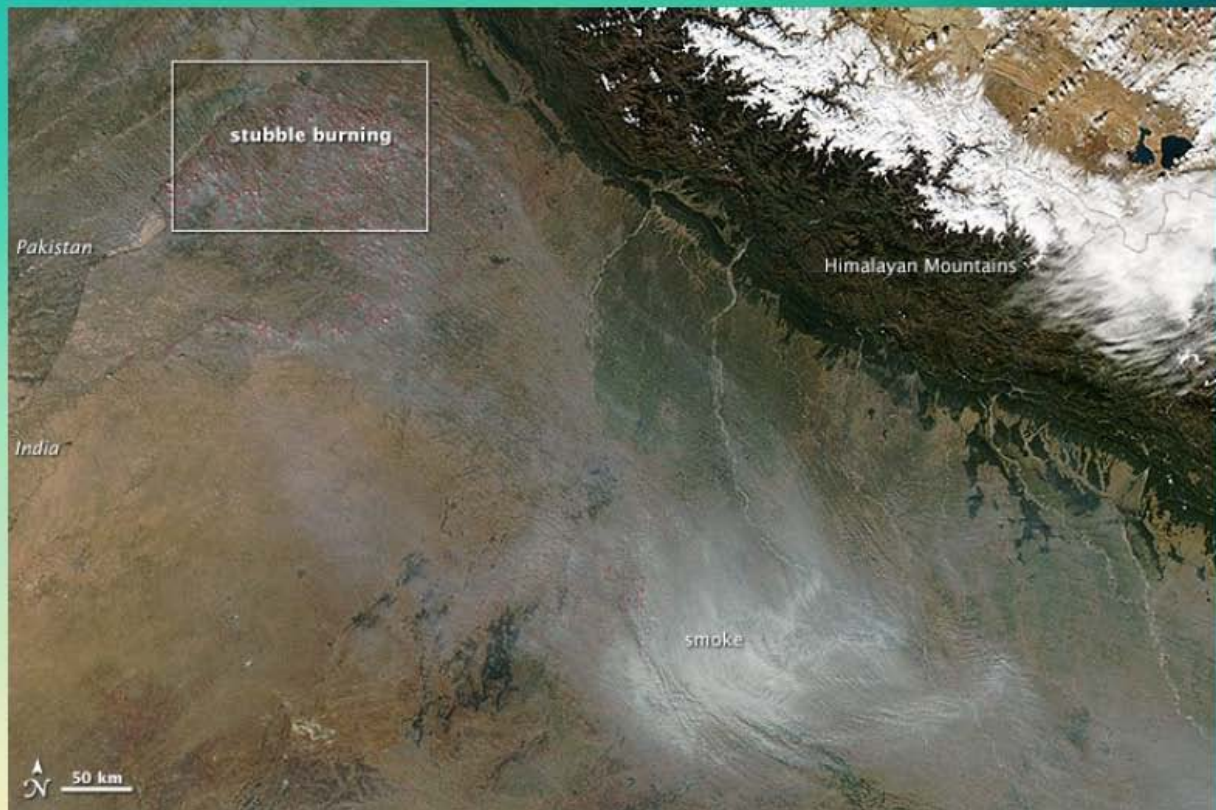
Thick haze blown off the Eastern coast of China, over Bo Hai Bay and Yellow Sea. The haze might result from urban and industrial pollution.

https://en.wikipedia.org/wiki/Pollution_in_China

In India, air pollution is quite a serious issue with the major sources being fuelwood and biomass burning, fuel adulteration, vehicle emission and traffic congestion. India is the world's largest consumer of fuelwood, agricultural waste and biomass for energy purposes. From the most recent available nationwide study, India used 148.7 million tonnes coal replacement worth of fuelwood and biomass annually for domestic energy use.

India's national average annual per capita consumption of fuel wood, agricultural waste and biomass cakes was 206 kilogram coal equivalent. Most Indian cities continue to violate India's and world air quality PM10 targets. Respirable particulate matter pollution remains a key challenge for India. Despite the general non-attainment, some cities showed far more improvement than others. Of the four major Indian cities, air pollution was consistently worst in Delhi, every year over 5 year period (2004–2008). Kolkata was a close second, followed by Mumbai. Chennai air pollution was least of the four.

Fuel wood, agricultural waste and biomass cake burning releases over 165 million tonnes of combustion products into India's indoor and outdoor air every year. To place this volume of emission in context, the Environmental Protection Agency (EPA) of the United States estimates that fire wood smoke contributes over 420,000 tonnes of fine particles throughout the United States – mostly during the winter months. United States consumes about one-tenth of fuelwood consumed by India, and mostly for fireplace and home heating purposes. EPA estimates that residential wood combustion in the USA accounts for 44 percent of total organic matter emissions and 62 percent of the PAH, which are probable human carcinogens and are of great concern to EPA. The fuel wood sourced residential wood smoke makes up over 50 percent of the wintertime particle pollution problem in California.



Aerial view showing India's annual crop burning, resulting smoke and air pollution. During the autumn and winter months, some 500 million tons of crop residue are burnt, and winds blow from India's north and northwest towards east. Courtesy of NASA Satellites, imaged in November 2013.

https://en.wikipedia.org/wiki/Air_pollution_in_India

Interesting tips to reduce carbon footprint in Workplaces

- Replace old desktops with laptops and thereby reduce annual CO₂ emissions by 17712 kg

Replace old desktops with laptops						
Replace 100 old desktops with laptops						
Reduce annual CO ₂ emissions by 17712 kg						
Reduce annual electricity bill by Rs 193100						
Appliance	Wattage (W)	Estimated daily use (hrs)	Estimated annual use (hrs)	Annual electricity consumption (kWh)	Emission factor (kg CO ₂ /kWh)	Annual CO ₂ emission (kg)
Desktop with LCD screen	148	8	2000	296	0.82	242.72
Laptop	40	8	2000	80	0.82	65.60
Savings						177.12
Savings for 100 replacements						17712.00

- Conduct a department wise paper reduction campaign thereby reduce annual CO₂ emissions by 82.5 kg per department

Conduct a department wise paper reduction campaign				
Reduce the use of 1 ream of paper per department				
Reduce annual CO ₂ emissions by 75 kg per department				
	Number of sheets reduced per month	Weight of paper conserved / year (kg)	Emission Factor (kg CO ₂ /kg of paper)	Annual CO ₂ Emissions Reduction(kg)
Requisition 1 ream less	500	30	2.5	75.00
Set printer to double side printing	50	3	2.5	7.50

- Take the stairs thereby reduce annual CO₂ emissions by 1221 kg

Take the stairs						
Reduce 10 lift moves between the ground and third floor.						
Reduce annual CO ₂ emissions by 245 kg						
Reduce annual electricity bill by Rs 2660						
Appliance	Wattage (W)	Estimated daily use (hrs)	Estimated annual use (hrs)	Annual electricity consumption (kWh)	Emission factor (kg CO ₂ /kWh)	Annual CO ₂ emission (kg)
Office elevator carrying 16-20 persons	42900	0.14	34.72	1489.58	0.82	1221.46