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UTTARAKHAND

Orchids face death

Gori Valley species threatened by development projects: Experts

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IT'S HOME to many varieties of beautiful and unusual-looking, brightly coloured flowers known as orchids.

The Gori Valley in Uttarakhand also happens to be the only spot in the entire western Himalayan region, where these flowers grow in large numbers.

But the pride of place this ecological hotspot enjoys because of orchids may not last long.

For, taking a huge toll on these tiny flowers is the mounting abiotic pressures (stress caused by non-living factors, such as air, wind, in an organism's environment) on the beautiful Gori valley, say experts.

The impact of global warming too, say environmentalists, has started becoming visible in the valley in Pithoragarh district, which is close to the Nepal border.

"In all, around 237 species of orchids are found in the valley. These all would be wiped out in the next few decades, if efforts are not made to conserve them," said Dr Jeevan Singh Jalal, a botanist at Kumaon University.

Posing a threat to these rare orchids are developmental works like construction of roads in the valley, he said adding, these roads were being built for the three hydropower projects coming up on river Gori.

"Because of the proposed construction of roads, hundreds of trees in the ecologically-fragile Gori Valley are likely to be felled", said Jalal, a recipient of the Young Scientist Award, who has been "engaged in the Community

SLOW DEATH

- Of the 237 species of orchids found in the Gori Valley, as 30 have been badly affected by habitat destruction.
- One species of the 30 is already extinct.
- Of the 29, nine species of orchids are on the verge of extinction



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These orchids may become extinct in the Gori valley if conservation is not undertaken.

Initiative For Orchid Conservation Project in the valley region since 2003". The project, he said, is being funded by the Rufford Foundation, UK.

Referring to the proposed construction of roads, he said the activity would result in the complete loss of all three kinds of orchids found in the valley namely terrestrial, epiphytic and saprophytic.

The terrestrial types of orchids grow on the ground whereas the epiphytic and saprophytic varieties grow on tree trunks and branches and on dead or decaying matter respectively, he said.

Besides, the orchid habitat in the valley has been ruthlessly fragmented due to human activities, the "obvious nature-crimes being felling of trees from the riverine habitat for agricultural practices, fod-

der and fuel wood etc", a report by Jalal said.

No wonder, the rapid habitat fragmentation "is proving to be disastrous for orchids, which are indicators of the health of a forest, in which they grow".

"Out of the total (237) species of orchids found in the Gori Valley, as many as 30 have been badly affected by the habitat destruction," Jalal said.

In fact, one of the 30 species, *Aphyllorchis gollani*, has long been rendered extinct, he noted while adding, that of the "remaining badly affected 29 species of orchids, nine are on the verge of extinction and the rest 20 are threatened".

"The only way these fast-vanishing orchids can be protected is by carrying out their ex-situ and in-situ conservation," said Dr Lalit Tiwari,

Reader at the Botany Dept of the Kumaon University's Nainital campus.

He said there was a lot of scope for ex-situ conservation in the Gori Valley and elsewhere in Uttarakhand, "orchids being a great foreign exchange earner".

Citing the example of South Asian countries, Tiwari said people in those countries earn \$10-15 per flower twig by exporting orchids to the US and several European countries.

Jalal said he has recently initiated a project, under which residents of Gori Valley are being sensitised to the need to conserve orchids. He claimed the initiative has elicited a good response and the process could get a further fillip if the residents were provided huge subsidy on cooking gas so their dependence on forests lessened.