

Old World's smallest frog discovered residing in killer plants

A new frog species described from Kerangas forests of Borneo has been named after a killer plant, for providing microhabitat to developing tadpoles and breeding ground to adults. In a research article published in *Zootaxa*, Indraneil Das (Universiti Malaysia Sarawak, Malaysia) and Alexander Haas (Hamburg University's Zoological Museum, Germany) have discovered Old World's smallest mycrohylid frog, *Microhyla nepenthicola* (Figure 1 a) from one of the world's smallest killer plants, *Nepenthes ampullaria*¹.

Killer plants, popularly known as pitcher plants, are carnivorous plants that feed on insects trapped in their pitchers.

The pitchers have waxy zones that function as traps for insects. *N. ampullaria* is an exception among the pitcher plants. It has lower pitchers, 10 cm high and 7 cm wide, grows under canopy and feeds on dead leaves that fall into the pitcher. *M. nepenthicola* uses microhabitats provided by *N. ampullaria* for reproduction, as it contains liquid inside the pitcher that can support the developing embryos. Tadpoles of this new microhylid frog were found inside the pitchers (Figure 1 b). The frog has overcome the death traps (waxy zones) of pitcher plants by its small-sized body (snout vent length in males, 10.6–12.8 mm; in females, 17.9–18.8 mm) and reduced webbing in the feet.

Frog dependency on plant was also observed in *Raorchestes ochlandrae*² from the Western Ghats of India. It was named after the bamboo reed *Ochlandra setigera*, wherein the frog was found using bamboo hollow for calling, breeding and endotrophic embryo development. The recent discovery has emphasized the importance of plants in structuring the evolution and ecology in frogs, paving the way for more studies in the field.

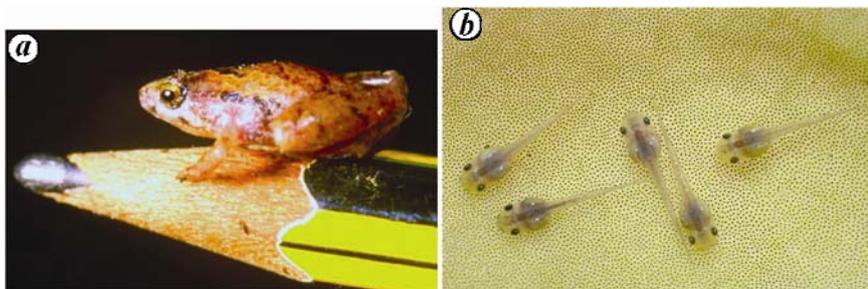


Figure 1. a, *Microhyla nepenthicola* adult on a pencil head and b, Tadpoles of *M. nepenthicola* within a pitcher of *Nepenthes ampullaria* (photos by Indraneil Das).

1. Das, I. and Haas, A., *Zootaxa*, 2010, **2571**, 37–52.
2. Gururaja, K. V., Dinesh, K. P., Palot, M. J., Radhakrishnan, C. and Ramachandra, T. V., *Zootaxa*, 2007, **1621**, 1–16.

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Is it necessary to do away with IIT–JEE?

This is in response to a news item in *The Hindu* (11 September 2010). It appears that many members present at the 41st meeting of the Indian Institute of Technology (IIT) Council expressed the opinion that a relook at the entrance examination system of IIT is necessary. Some members were in favour of abolishing the examination altogether, with greater emphasis on the selection of students on the basis of school board examinations.

True, in our country many things go wrong in education and sports. However, in both these cases the selection process is inherently discriminatory with meritocracy as the guiding principle. We live with an age-old belief that if something is working well, do not tinker with it!

In post-independence India, in the last six decades, if anything has paid us rich dividends it is the establishment of the IITs and their stringent selection procedure. The output from such stringency is spread out world over. I do not understand why the scientific administration wants to line up behind a notion that the students are burdened with entrance examinations. Has any student expressed such an opinion?

National-level examinations like the IIT–JEE are necessary in a country where glaring disparities exist not only between states, but even within states in terms of syllabus, quality of teaching, teaching materials/methods and evaluation processes. Being closely associated with the Kishore Vaigyanik Protsahan Yojana for the past several years, my

experience is that students take these examinations as challenges. The least the administration can do is to ensure that these examinations could be varied in their content and context and be effectively used to bring to the forefront differently enabled children.

Thus, it was interesting to read ‘...class XII examination performance be assessed state-wise so that there would be no complaint of bias’. Are we embarrassed with our examinations? (*The Hindu*, 11 September 2010.)

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