Wild Neurospora isolated from soil

P. Palanivelu

Indian Institute of Science

R. Moherhwari

Indian Institute of Science

Follow this and additional works at: <https://newprairiepress.org/fgr>

This work is licensed under a [Creative Commons Attribution-Share Alike 4.0 License](https://creativecommons.org/licenses/by-sa/4.0/).

Recommended Citation

Palanivelu, P., and R. Moherhwari (1979) "Wild Neurospora isolated from soil," *Fungal Genetics Reports*: Vol. 26, Article 11. <https://doi.org/10.4148/1941-4765.1699>

This Research Note is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Fungal Genetics Reports by an authorized administrator of New Prairie Press. For more information, please contact cads@k-state.edu.

Wild Neurospora isolated from soil

Abstract

Wild Neurospora isolated from soil

Wild *Neurospora* isolated from soil.

250km radius and some places in Tamil Nadu and Kerala. The sites sampled were at least 1-2km apart and most were 10-15 km apart.

Of the eighteen isolates in pure culture and purified by single-spore isolation, fifteen were identified as *N. intermedia* based on the viability of ascospores produced following crosses with tester strains (FGSC #1766 and #1767) or with wild isolates which were identified as *N. intermedia*. One isolate each from soil from an arecanut and a coffee field behaved as *N. sitophila* in crosses with tester strains (FGSC #2216 and #2217). *N. sitophila* was also isolated from a sample of soil collected in Port Blair, Andaman Islands in the Bay of Bengal. It should be mentioned that our earlier isolates designated as *N. crassa* (Maheshwari and Antony, 1974) have now been identified as *N. intermedia*. We had previously not taken into account the fact that most of the ascospores were inviable that were produced in crosses to *N. crassa* testers.

Since our isolation procedure was based on heat-treatment which activates dormant ascospores and kills conidia, this study suggests that ascospores are prevalent in soil. Both mating types were recovered with approximately equal frequency from some soil sampler.

The isolates differed in growth characteristics, pigmentation and fertility. In our experience crosses with these isolates were uniformly better on Westergaard and Mitchell's medium with filter paper (Whatman #3) rather than sucrose as the carbon source. None of the isolates grew above 42°C in minimal or in rich medium. This study and the collections made by Perkins (Perkins, Turner and Barry 1976 Evolution 30: 281) establish that Southern India is rich in *Neurosporas*.

We thank D.D. Perkins, Stanford University, for advice. Soil from Port Blair, Andaman Islands was collected by Romulus Whitaker. ■ ■ ■ Department of Biochemistry, Indian Institute of Science, Bangalore 560012, India.

We earlier reported a technique for isolating *Neurospora* from soil (Maheshwari and Antony 1974 J. Gen. Microbiol. 81: 505). Using this technique we have recently isolated *Neurospora* from 18 out of 25 soil samplers from cultivated fields of arecanut, cardamom, coconut, coffee, paddy, sugarcane and also from natural forests of teak and other species in Southern India. The localities sampled were mostly southwest of Bangalore along a