

Editor's Note: It's hard to arouse public enthusiasm for saving question marks. The whole question of what **might** exist in vanishing habitats – what **might** be disappearing forever before we can explore its possible future uses – is a difficult concern to sell. It can therefore be viewed as serendipitous that the object of the Squibb Institute's worldwide search for a substance that will battle penicillin-resistant infections seems to have turned up in the Squibb lab's own back yard – the Jersey Pine Barrens.

In a soil sample from the moist forest land that covers 1.1 million acres of southern New Jersey, scientists at last found a bacterium that gave them the structural clue they needed to produce a new kind of monobactam – one whose singular molecular structure is resulting in a new class of antibiotics that is not easily neutralized by bacteria able to deactivate penicillin and other groups of antibiotics.

(Monobactam is shorthand for monocyclic beta-lactam, which differs markedly from the bicyclic beta-lactam structure of penicillin – a compound first recognized in fungi.)

Squibb scientists spent two years screening more than a million soil samples from all over the world, looking for the chemical configurations in nature they could work with to produce effective synthetic pharmaceuticals. The designation by Congress of the Pinelands National Reserve was seen by Richard B. Sykes, chief microbiologist at the Squibb Institute, as a large factor in the preservation of the required pattern for combatting premature human death.

"Our discoveries have always come from soil samples taken from places such as the Pinelands and the Great Swamp (also in New Jersey and also protected) where there is little or no pollution," he said, adding that a relatively unspoiled environment permits a tremendous variety of life forms to flourish, whereas the number of species in a polluted ecosystem narrows considerably.