The browser you are currently using does not support Discover's photo galleries. Supported browsers include recent versions of Mozilla Firefox, Microsoft Internet Explorer (version 7 or later), Google Chrome, and Apple Safari.

If you have any questions or feedback, please email webmaster@discovermagazine.com. Thank you for reading Discover, and we apologize for the inconvenience.

Lizzie Buchen; published February 25, 2008

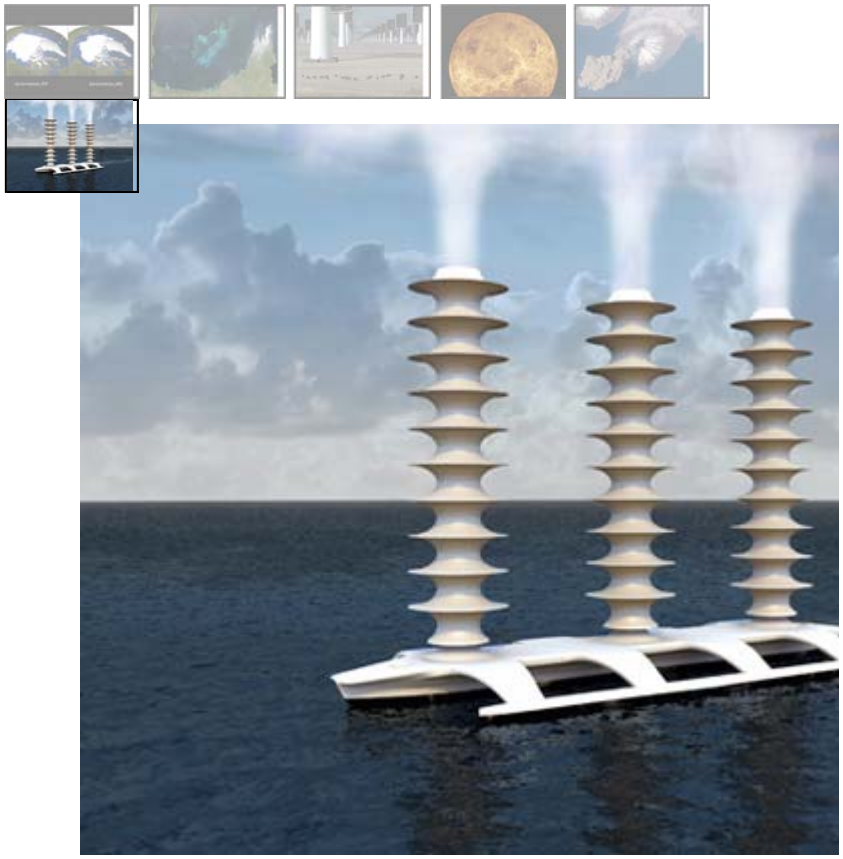


Image courtesy of John MacNeill

WELCOME TO PLANET SEATTLE

How it works: Marine stratocumulus clouds blanket about a third of the world's oceans, mostly around the tropics, reflecting sunlight and shading the seas. To give clouds a boost in reflectivity, University of Edinburgh engineer Stephen Salter and John Latham, an atmospheric physicist based at the National Center for Atmospheric Research in Colorado, have designed a fleet of vessels that would continuously spray a fine mist of saltwater into the air. As the ships moved through the ocean, Flettner rotors would draw seawater into the spraying system and geyser the droplets at high speed from the tops of the rotors. The water droplets would evaporate as they rose to the clouds; water vapor in the clouds would then condense on the remaining salt, making the clouds thicker and more reflective. Latham and the appropriately named Salter estimate that about 1,000 ships would be required to make the plan effective.

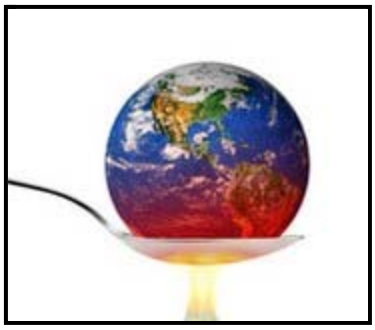
Pros: Effects are short-lived, so if there's some deleterious effect, the process could be stopped immediately. It's a relatively cheap system to maintain (no one's put a price on seawater yet), and the ships would be wind-powered, radio-controlled, and unmanned.

Cons: Effects are short-lived, so you'd have to spray continuously. Another fear is that salt particles could, ironically, impede the formation of rain clouds, causing droughts.

More Galleries

The 100 Top Science Stories of 2010

Every year DISCOVER sorts through the scientific accomplishments of the past 12 months, and assembles a list of the coolest experiments, most brilliant discoveries, and most world-changing events. As you page through the countdown to the #1 science story, we think you'll come to the same conclusion we did: 2010 was quite a year.



7 Visions of Our Hot, Awful Future

A bounty of 2010 books predict the future in a globally warmed world. Among the forecasts: boom town Detroit, abandoned Miami, an Arctic black gold rush, and a weirdly strong dried fruit market.

8 Keys to Deciphering Ancient Climates

Our lives extend only decades, so how do scientists study climate going back thousands and millions of years? Ancient pollen, clam shells, columns of sheer ice, and more.