

Visits to the Galapagos

Mickey Maxwell Cohen made his first visit to the Galapagos Islands in 1984 and is planning to make his 18th return visit this coming August. The former Chairman of the Department of Science and Oceanography at Beach Channel High School in New York City, Cohen was the keynote speaker at the 30th Annual Convention of the Science Council of New York at Stuyvesant High School on 14 April 2007. His subject: "The Galapagos Islands: Nature At Its Purest."

Cohen opened by observing that although Charles Darwin spent only 19 days during his five-year voyage on the *Beagle*, Darwin repeatedly cited the impact they had on him. Later Rosemary and Peter Grant, through annual visits to the Galapagos in the 1970s, studied the evolution of what have been called Darwin's finches there. These islands, Cohen pointed out, are volcanic in origin, 13 of them major, 13 minor.

Cohen, who said he uses the term "theory" to refer to "natural selection" (though the Grants have observed it) but regards evolution as "fact," showed pictures of plants growing in cinder, so regularly spaced that they appear to have been planted in a predesigned arrangement. Not so, he went on, noting that a research project of the licensed Galapagos guides found that their roots are found to emit a substance to keep similar plants from growing too close.

Cohen then went on to discuss the tortoises for which the Galapagos are famous. In addition to being a source of food for seamen, they are also a source of fresh water, which they get from grazing on plant life, particularly cacti, which have responded in their own evolutionary way by becoming too high for the tortoises to reach, to the level of becoming a tree.

Cohen also discussed the iguanas and rich variety of bird life, in addition to the 13 varieties of finch studied by Darwin and the Grants. The Grants, Cohen said, did their work by measuring the beaks of 8000 finches on Daphne Major. They found that only the finches with the largest beaks survived a seven-year dry spell, when the only plant life had seeds hard to crack. But during a subsequent El Niño, the plant life shifted to small seeds, which the large-beaked finches could not crack (the unopened seeds were found in their stomachs).

Cohen closed by observing that Jonathan Weiner, author of *The Beak of the Finch*, which describes the work of the Grants, considered his book's title to be an icon of evolution. But Cohen said that he would choose "the tail of the tortoise" instead.

(Editor's Note: Sara Anderson reviewed *The Beak of the Finch* in our Spring 1995 issue.)