

Climate change – a topic at zoos, aquariums

By Leslie Kaufman, *New York Times*

BOSTON – Sitting on an artificial mangrove island in the middle of the ray and shark “touch tank,” Lindsay Jordan, a staff member at the New England Aquarium, explained the rays’ eating habits as children and their parents trailed fingers through the water. “Does anyone know how we touch these animals when we are not at the aquarium?” she asked.

The children’s faces turned up expectantly.

“The ocean absorbs one-third of the world’s carbon dioxide emissions,” Jordan said, explaining that it upsets the food chain. “When you turn on your car, it affects them.”

Downstairs, next to the jellyfish tanks, a rhyming video told how the jellyfish population was exploding in the wild because they thrive in warmer waters. In the main room, a staff member pointed to a rare blue lobster, saying that some lobsters have been scuttling out of Massachusetts and settling in cooler climes to the north.

With many zoos and aquariums now working with conservation organizations and financed by individuals who feel strongly about threatened habitats and species, managers have been wrestling with how aggressive to be in educating visitors on the perils of climate change.

Surveys show that American zoos and aquariums enjoy a high level of public trust and are ideally positioned to teach.

Yet many managers are fearful of alienating visitors – and denting ticket sales – with tours or wall labels that dwell bleakly on damaged coral reefs, melting ice caps or dying

trees.

“You don’t want them walking away saying, ‘I paid to get in, I bought my kid a hot dog, I just want to show my kid a fish – and you are making me feel bad about climate change,’ ” said Paul Boyle, the senior vice president for conservation and education at the Association of Zoos and Aquariums.

Some zoos and aquariums have therefore held back, relegating the theme to, say, a sign about Arctic melting in the polar bear exhibit. But many have headed in the other direction, putting climate change front and center in a way that they hope will inspire a young generation of zoogoers.

Working with cognitive scientists and experts in linguistics and anthropology, a coalition of aquariums set out in 2008 to develop a pattern that would intrigue rather than daunt or depress the average visitor. After the group was pleased with the script, it secured a grant of about \$1 million last year from the National Science Foundation to train staffs across the nation. This month, the foundation awarded the group an additional \$5.5 million for a five-year education effort.

Boyle said that most of the association’s 224 members now have some sort of climate message.

The form varies from subtle to pointed. The zoos in Cincinnati and Toledo, Ohio, for instance, have installed prominent solar arrays over their parking lots to power exhibits and set an example. The San Diego Zoo and the Brookfield Zoo near Chicago have made their exhibits of polar bears and other Arctic species more direct about the threats posed by global warming.

So far the feedback has largely been positive, officials at most zoos say.

Ariella Camera, a counselor with a summer program run by Boston Rising, an antipoverty group, said some of her charges recently took part in a game at the New England Aquarium that

taught them what emits carbon dioxide (many factories, most cars) and what absorbs it (trees and the ocean). They were then challenged to balance the two.

Afterward the students struck up a lively conversation about their carbon footprints, Ms. Camera said. "It was a very engaging presentation," she said.

Such anecdotes gratify Howard Ris, the aquarium's president. "We would like as many people, if not everyone, to leave encouraged to take action," he said.

Others are dubious that it will work. "Zoos have been making claims about their educational value for 150 years," said Jeffrey Hyson, a cultural historian and the director of the American studies program at St. Joseph's University in Philadelphia. The zoos "say a lot more about what they think they are doing than they can really demonstrate."

Zoo managers acknowledge that they initially struggled with the challenge of delivering bad news.

In the 1980s and '90s, Dr. Boyle noted, some zoos and aquariums made a big push to emphasize threats like the depletion of the earth's ozone layer, the razing of rain forests by loggers and farmers and the overfishing of the Pacific. Electronic boards toted up the numbers of acres being cleared, and enlarged photographs depicted denuded landscapes.

Surveys of visitors showed a backlash. "For lots of reasons, the institutions tended to approach the issues by talking about the huge scale of the problems," Dr. Boyle said. "They wanted to attract people's attention, but what we saw happening over time was that everyday people were overwhelmed." It did not help that a partisan split had opened in the United States over whether global warming was under way, and whether human activity was the leading cause.

At the Georgia Aquarium in Atlanta, Brian Davis, the vice

president for education and training, says to this day his institution ensures its guests will not hear the term global warming. Visitors are “very conservative,” he said. “When they hear certain terms, our guests shut down. We’ve seen it happen.”

Such hesitancy inspired the group of leading aquariums to develop, test and refine their model, which comes off as casual and chatty.

Word choices matter, research showed. The FrameWorks Institute, a nonprofit organization that studies how people process abstract concepts, found the phrase “greenhouse gas effect” perplexed people. “They think it is a nice place for plants to grow,” said FrameWorks’ president, Susan Bales. So her group advised substituting “heat-trapping blanket” to describe the accumulation of gases in the atmosphere.

Today’s guides also make a point of encouraging groups to focus first on the animals, leaving any unpleasant message for later.

At the New England Aquarium’s giant reef tank, visitors peered over the side and watched sand tiger sharks, sea turtles and tropical fish swim around a giant coral reef. As a diver entered the tank to feed the fish, a guide explained that the smaller ones tend to hide in coral for safety.

A few minutes passed before she told the crowd that corals around the world are bleaching and dying because of a pronounced rise in ocean temperature and acidity.

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