

Editorial

Anthophilia and the Quality of Life

Anthophilia, the love of flowers must have co-evolved deep in the natural history of human beings. The sight of flowers conveys several messages, signifies warm weather and food potential for humans, and brings to plants the opportunity for pollination and perpetual cultivation. The utilitarian or survival instinct of anthophilia has only partial explanatory power because humans also seem to have a deep aesthetic instinct toward deep affection for flowers, including the commingling of the senses of color vision, texture, and smell – otherwise known collectively as synesthetic tendencies¹. How far will we go, and what quality of life will we sacrifice in order to experience the cultural, psychological and emotional benefits of close proximity to flowers that have no nutritional value? Apparently, we are willing to travel thousands of miles and to sacrifice considerable impact on human health and the environment, as evinced by the flourishing international floriculture business (Figure 1).

Several articles have been written about the environmental and human health impacts of floriculture, and on the hemispheric disparity in benefits versus risks of the trade². But most of these arguments end with hand wringing about the creation of employment opportunities in the relatively poor countries that exchange poorer quality of life for economic benefits. Yes, there have been some tangible advances notably in the phasing out of notorious pesticides such as methyl bromide, but this is only a partial success story because it is associated with global issues regarding the impact of this particular fumigant on the stratospheric ozone layer. It is doubtful that methyl bromide has been replaced with less toxic pesticides with respect to the direct burden on humans and wildlife.

It is time for a real green revolution in the floriculture business. We must impose international restrictions on pesticide use on all plant products regardless of whether they are meant for food or for recreation. The damage is not only in direct consumption, but on the residuals left in the land and in the water systems that support floriculture. Lake Naivasha in Kenya has become the poster case for the economic and quality-of-life disparities associated with floriculture (Figure 2). As far back as the early 1990s, organochlorine pesticide residues were detected in fish inhabiting the lake³. The situation has gotten worse as the floriculture business around Naivasha has boomed, supplying about 40% of all cut flowers exported to Europe.

According to the Society of American Florists, the annual sales of cut flowers in the United States increased almost five fold over the past two decades from approximately \$1 billion in 1984 to approximately \$5 billion in 2005. Also in 2005, the number of fresh cut flower units imported into the U.S. was approximate 3 billion⁴. Most of these are roses, and about 80% of flower purchases were made by women. The largest category of flower purchasers were affluent empty nesters, supporting the view that strong anthophilia is associated with tangible benefits to overall quality of life. It is prudent to keep this benefit, but not at the cost of reduced quality of life for people and environments that are already marginalized in other respects. So, how do we balance these opposing desirables?

Perhaps it is time to explore virtual floriculture. It may be possible, in this digital electronic age, to recreate the sensory stimulation provided by anthophilia. Virtual reality is fast becoming a reality in many other corners of human affairs. Those who are currently employed in floriculture business can be easily absorbed into this virtual world if we plan the transition well. Meanwhile, we must have equal protection of our environment and health from pesticides in agriculture and floriculture. It is the only way to guilt-free anthophilia.

¹ Ogunseitan, O.A. 2005. Topophilia and the Quality of Life. *Environmental Health Perspectives*, 113(2): 143-148.

² David Tenenbaum. 2002. Would a Rose Not Smell As Sweet? *Environmental Health Perspectives*, 110(5):A240

³ Gitahi, S.M. 1999. Pesticide contamination in Lake Naivasha (Kenya). *Oceans*, 1:319 – 323.

⁴ Society of American Florists. 2006. The changing floriculture industry: Fourth edition. http://www.safnow.org/component/option,com_frontpage/Itemid,1/

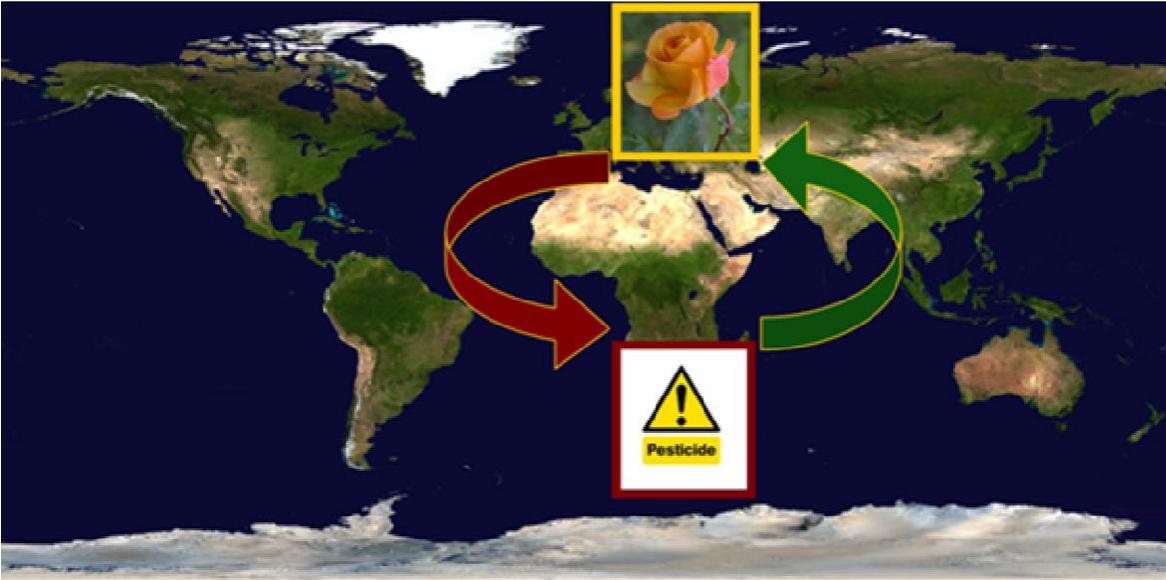


Figure 1. International trade in fresh cut flowers goes in one direction where purchasers in the northern hemisphere get the psychological benefit of anthophilia, whereas the detrimental effects of unregulated pesticide use in floriculture affects the people and environment in the southern hemisphere. Global map image is reproduced by courtesy of NASA. http://veimages.gsfc.nasa.gov/2433/land_shallow_topo_2048.jpg



Figure 2. The region around Lake Naivasha in Kenya produces fresh cut flowers that supply the demand in Europe at the cost of pesticide loading of the ecosystem, affecting aquatic life including fish and large animals such as the hippopotamus. NASA image created by Jesse Allen, using data provided courtesy of NASA/GSFC/METI/ERSDAC/JAROS, and U.S./Japan ASTER Science Team. http://earthobservatory.nasa.gov:80/Newsroom/NewImages/images.php3?img_id=17976