

# There's No Need to Release Butterflies -- They're Already Free

by Jeffrey Glassberg (president of NABA); Paul Opler (author of *Peterson Field Guide to Eastern Butterflies*); Robert M. Pyle (author of *Audubon Society Field Guide to Butterflies*); Robert Robbins (curator of Lepidoptera, Smithsonian Institution) and James Tuttle (president, (Lepidopterists' Society))

Most fifth graders can tell you how the magnificent Monarch butterflies migrate thousands of miles every autumn from the United States and Canada to a few small mountain tops in Mexico. There they find the right environmental conditions that allow them to survive the winter. With the advent of spring, they begin their return journey. This migratory phenomenon is truly a wonder of nature that sparks the imagination.

Now imagine tens of thousands of mixed-up Monarchs unable to find the way to their overwintering grounds. This depressing image may become a reality if the rapidly-growing fad of releasing butterflies, including Monarch butterflies, at weddings, state fairs, and other public events continues to spread. Because the released Monarchs may have come from California, for instance, where they do not migrate to Mexico, their offspring may not be able to orient properly. Because the Monarchs were raised inside under unnatural conditions, it is possible that their delicate migratory physiology may not have been turned on.

Public interest in butterflies is increasing dramatically. We hope and expect this greater involvement with butterflies will eventually lead to much-needed support for butterfly conservation and studies, but the release of live butterflies is the dark side of this increase in popularity. Although this practice is understandable to naive newlyweds-to-be (what could be more beautiful than adding butterflies to the environment?) it is really a particularly long-lasting form of environmental pollution.

Butterflies raised by unregulated commercial interests may spread diseases and parasites to wild populations, with devastating results. Often, butterflies are released great distances from their points of origin, resulting in inappropriate genetic mixing of different populations when the same species is locally present. When it is not, a non-native species is being introduced in the area of release. At best, this confuses studies of butterfly distribution and migration; at worst, it may result in deleterious changes to the local ecology. The Hollywood Jurassic park message, "Don't fool with Mother Nature," has scientific foundations. Recently a high profile report in *Science* magazine found that even the careful introduction of species for biological control often causes unexpected negative results.

In addition, these releases create a commercial market for live butterflies (currently about \$10/apiece), with the result that, for example, the Monarch overwintering sites in Mexico and on the California coast are now targets for poachers.

Currently, the interstate shipment of live butterflies requires a permit from the U.S. Department of Agriculture but this law is not usually enforced. In general, the Dept. of Agriculture may issue a permit for shipping any of the following species: Monarch, Painted Lady, American Lady, Red Admiral, Giant Swallowtail, Gulf Fritillary, Zebra (Heliconian), and Mourning Cloak. Shipping Red Admirals, Giant

Swallowtails, Gulf Fritillaries and Zebra (Heliconians) is particularly inappropriate because they are not naturally found over much of the United States.

A solution that better serves the public interest with less regulatory burden is to ban the environmental release of commercially-obtained butterflies (we would exempt education institutions, although even here we would encourage schools to keep commercially-obtained butterflies within the confines of the school). The intentional release of native birds was outlawed in 1947. The time has come to do the same with butterflies.

In addition to the above, many wedding planners now avoid butterflies at weddings because they not infrequently arrive dead, or half-dead. (See the recent article in the New York Times "Festive Release of Butterflies Puts Trouble in the Air" on page F4 of the Sept. 15, 1998 edition). Even if alive, they often will soon die because they are released at the wrong time of year, or at the wrong locality to survive.

A truly beautiful and environmentally friendly way to celebrate a wedding is to throw rose petals. You can even use outdated roses from your florist.

## Butterfly Releases: Action You Can Take

It has been almost three years since the editorial "There's No Need to Release Butterflies -- They're Already Free" appeared in this space. The editorial (by Jeffrey Glassberg -- president of NABA and author of *Butterflies through Binoculars*, Paul Opler -- author of *Peterson Field Guide to Butterflies*, Bob Pyle -- founder of Xerces Society and author of *Audubon Society Field Guide to Butterflies*, Bob Robbins -- curator of Lepidoptera at the United States National Museum, Smithsonian Institution, and Jim Tuttle -- then president of the Lepidopterists Society) explained why releasing commercially raised butterflies into the environment -- at weddings and other events -- is a truly terrible idea.

At NABA, we are often contacted for permission to reproduce the editorial, and for information about butterfly releases. It is clear that the editorial, and NABA's continuing efforts to educate the public about the potentially devastating effects of butterfly releases has had a significant impact. Many, many individuals have reconsidered their own plans to release butterflies into the environment after reading the information from NABA. The fact that the commercial butterfly breeders who encourage these releases are constantly attacking NABA is a clear measure of the impact that we are achieving.

There is now an opportunity for all NABA members to personally make a contribution. As was mentioned in the earlier editorial, the United States Department of Agriculture (USDA) has taken the position that it is appropriate for the USDA to regulate the interstate shipment of live butterflies, since butterflies are potential agricultural pests.

The USDA is now reconsidering its regulations regarding the interstate shipment of live butterflies. My understanding is that the USDA is likely to propose regulations significantly *weakening* the already unacceptably lax regulation of these shipments. Currently, the interstate shipment of live butterflies requires a permit from the USDA. The USDA will consider issuing permits for shipping nine butterfly species -- Giant Swallowtail, Zebra Heliconian, Gulf Fritillary, Mourning Cloak, American Lady,

Painted Lady, Red Admiral and Monarch. The regulations being considered would allow interstate shipments of American Ladies, Painted Ladies and Red Admirals *without any permit*.

**What Can You Do?** Because the USDA listens to public opinion, it is important that you contact the USDA and express your views regarding this threat to wild butterfly populations. Write to: Wayne F. Wehling, USDA-Aphis, PPQ PRA, Unit 133, 4700 River Rd., Riverdale, MD 20737; or send an email message to him at [Wayne.F.Wehling@usda.gov](mailto:Wayne.F.Wehling@usda.gov).

In addition, The National Invasive Species Council, in the Dept. of the Interior, has published an Invasive Species Draft Management Plan that is open for public comment. You can comment about this plan, saying that it needs to consider the effects of the interstate shipment of butterflies, by writing to: National Invasive Species Council, U.S. Dept. of the Interior - South, 1951 Constitution Ave. NW, Suite 320, Washington DC 20240; or by sending an email message to [invasivespecies@doi.gov](mailto:invasivespecies@doi.gov). Written letters are more effective than emails.

Please let the USDA and the Dept. of the Interior know that you object to the interstate shipment of commercially-raised butterflies intended for release into the environment. Here are some of the reasons you can provide to them why these shipments and releases should not be provided:

**Because butterflies are pollinators, they are an important component of plant ecosystems, not just potential plant pests.** Heretofore, the USDA has viewed their authority to regulate the shipment of butterflies as stemming only from their potential as plant pests. However, butterflies are a major part of the pollination community. Although the efficiency of butterfly-induced pollination is lower than bee-induced pollination, the cumulative importance of butterfly pollination is probably important to many plant communities. From personal observations, I would conclude that for particular plants in particular areas, butterflies are probably the major factor in pollination. Because any threat to butterfly populations is a threat not only to the butterflies themselves, but also to plant communities, the USDA does have the authority to regulate potential threats to butterfly populations.

**Releases of commercially-raised butterflies may spread diseases and epidemics to native butterfly populations.** This issue is critical. All known biological organisms are affected by diseases and parasites. The spread of diseases from one area to another has decimated populations. For example, American chestnuts almost became extinct due to the introduction of a fungus from Europe. The transmission of measles from European populations of humans to New World populations of humans killed more Native Americans than died in any wars. The lesson here is that not all populations of the same or related species have been exposed to all diseases that may affect that species. Our knowledge of butterfly diseases is rudimentary, but we do know that there are many species of viruses, including many baculoviruses and nuclear polyhedral viruses, many bacteria, and many fungi that cause diseases of butterflies. Such diseases have been found to be prevalent in shipments of commercially-raised butterflies.

Shipping butterflies from California to New York, or from Florida to New York or California and then releasing the butterflies into the environment would allow a California disease to spread to wild butterfly populations in New York, or a Florida disease to spread to California. The fact that Red Admirals can be found in Florida and in California does not preclude the likelihood that some diseases

or parasites of Red Admirals and other butterflies are currently limited in their range to, for example, Florida, or to California.

In the late 1940's, House Finches, a bird that until then had been found only in the western United States, were released onto Long Island, New York. These few birds have now spread throughout the entire eastern United States, demonstrating that although a particular species may currently be found in only one section of the United States, there is no guarantee that it will not thrive in a different region if introduced into that region. If this is true of a bird, it can be just as true of a disease-causing organism.

The practice of shipping live butterflies around the country and releasing them into the environment carries with it the possibility of unleashing invasive diseases.

**Large-scale commercial operations foster the spread of disease and the generation of new diseases that can devastate butterflies.** It is well known that agriculture and animal husbandry, by increasing densities of an organism, create conditions that are extremely favorable for the spread of disease-causing agents of that organism. In addition, these conditions encourage the creation of new disease-causing organisms.

**The fitness of local butterfly populations may be decreased by interbreeding with released individuals.** A recent report in *Nature* (Moore, P.D. 2000. "Conservation biology: Seeds of doubt." *Nature* 407: 683-685.) highlights the unexpected finding that, released into the environment, individuals that originate non-locally, will breed with local individuals and decrease the fitness of the local population, by introducing genes that are not optimal for the local environmental conditions.

**Scientific studies and observation by butterflyers are confused by butterfly releases.** The movements and migrations of butterflies are still very poorly understood. Scientists, trying to track, for example, northward movement in the spring of Painted Ladies, now are confused by Painted Ladies being released into the environment. Butterflyers, who would be thrilled to see a Zebra Heliconian in North Carolina are cheated out of a satisfying experience because now the butterfly may well have occurred there unnaturally.

**The commercially-raised and released butterflies often suffer.** These butterflies often arrive dead or dying, and then are often released into hostile environments at inappropriate times of the year.

**Butterflies are living animals, not toys.** There is something ethically wrong with treating butterflies as if they were mere playthings for humans. They are not toys, or to use a Bob Pyle phrase, "living balloons."

We do not allow those who like birds to ship chickadees around the country and then to release them into the environment. There is no reason to allow butterflies to be treated any differently.

**For all of the above reasons, please make your voice heard.**

## Other Organizations' Views on Butterfly Releases

## **American Museum of Natural History**

### Butterfly Release: A Misguided Practice

Most butterfly farms sell only to exhibitions, educators and responsible collectors, who keep the adult butterflies in captivity. Breeding butterflies for release into the wild at special events poses serious risks to wild butterfly populations and is not endorsed by conservationists.

## **Callaway Gardens**

Callaway Gardens, situated on 2500 acres in Southwest Georgia, is a popular destination for anyone wishing to enjoy the gardens, the Day Butterfly Center, golfing, and recreation. We also host hundreds of weddings throughout the year. Recently, the fad of releasing butterflies at weddings has become an important issue and we, at Callaway Gardens, felt it necessary to make some changes.

A few weeks ago a bride contacted me to request that she be able to release Monarch butterflies at her wedding. I asked her where she was purchasing the butterflies and she replied California. At that, I informed her that not only would the release be potentially harmful for the butterflies but also that the release would be illegal! She was quite surprised when I informed her and conceded that releasing butterflies was not the best way to celebrate her wedding.

This incident has prompted Callaway Gardens to prohibit any sort of butterfly release in the gardens. Visitors can see numerous species of native and exotic butterflies here at Callaway Gardens and it won't cost them extra money! I hope that other botanical gardens, nature centers and zoos, where many weddings and special events take place, will follow suit and inform people of the possible deleterious effects of unnatural butterfly releases.

*Cynthia Mazer*

*Director, Day Butterfly Center*

*Callaway Gardens*

## **National Wildlife Federation**

The National Wildlife Federation discourages releases of commercially obtained butterflies for a number of reasons, including:

Releasing butterflies can result in the possible introduction of species into areas where they are not native, possibly carrying and spreading diseases at the same time.

Even if a species is native, a farmed population has a different genetic make-up than the population into which it is being introduced. This might result in negative effects on local populations.

Introductions are not the solution to dwindling butterfly populations. Habitat conservation and the elimination of pesticides from the food chain are better solutions.

## **Washington Department of Fish and Wildlife**

Butterfly releases could unleash problems for state wildlife

It looks like a harmless, uplifting way to end a wedding ceremony, but the popular practice of releasing mail-ordered butterflies could leave a legacy of lasting damage, Washington Department of Fish and Wildlife (WDFW) biologists warn. The biologists' chief concern is that released butterflies could decimate their native counterparts here by introducing disease, competing for food and altering survival behavior by interbreeding with them. Many of the state's native butterflies already are under pressure because their native habitat is vanishing--one species already is on the state's endangered species list, another is recommended to be added to the list of threatened animals and 12 more are candidates for state protection listings. "This activity has the potential to do a lot of damage, and I don't think the people doing it realize that," said Ann Potter, a WDFW wildlife biologist.

Released butterflies generally are mail-ordered or purchased over the Internet from out-of-state dealers, and may originate from far-flung locations in North America or abroad. Businesses are supposed to have a state Department of Agriculture permit in order to sell them to state residents. In addition, a WDFW permit is required to release wildlife and that includes butterflies. The Department must evaluate the potential damage such releases can cause.

Ceremonial butterfly releases are a relatively recent but increasingly popular custom. In addition, mail-ordering butterflies for students to raise and release is becoming a staple of schoolroom science projects. Releasing non-native animals of any kind teaches a poor lesson, Potter said, because their effect on the local environment is unpredictable and potentially devastating. Examples abound of non-native fish, animals and plants which overrun their new settings because they lack natural predators. Potter cites the case of the gypsy moth, introduced in Massachusetts in the 1800s by silk producers eager to improve the vigor and productivity of their silk worms. The introduced moth has gone on to cause widespread damage to forest land and has prompted widespread pesticide spraying.

Butterflies are especially vulnerable to introduced intruders because native butterfly populations are small and localized to specific areas. Introductions of even a few non-local butterflies of breeding age could "swamp" the natives, Potter said. Wild, migratory butterflies which spend part of the year here also could be harmed if they bred with introduced butterflies and their offspring lost their migratory instincts.

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