The New York Times



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September 15, 1998

Festive Release of Butterflies Puts Trouble in the Air

By CAROL KAESUK YOON

BASKING in their first moments of nuptial bliss, brides and grooms around the country are exiting churches, showered not with rice or confetti, but surrounded instead by the fluttering gossamer wings of hundreds of butterflies. All but unheard of just a few years ago, butterfly releases are the latest fashion at weddings, not to mention at memorial services, grand openings, divorces and prison releases.

"The beautiful flight of the butterflies as they ascended -- it captured the beauty and the spirit of the day," said Dr. Patricia Heaman of White Haven, Pa., who ordered a "mixed bouquet" of several species of butterflies for the garden wedding last month of her nature-loving daughter. "It just seemed like the natural culmination to a natural event."

But while some view the release of butterflies as a celebration of natural beauty, many others -including conservationists, scientists and amateur butterfly enthusiasts -- see it as a misguided
practice that poses serious risks to wild butterfly populations and compromises scientists' ability to
study phenomena like the annual migration of the monarch butterfly.

"It's really such a disgusting development," said Dr. Jeffrey Glassberg, president of the North American Butterfly Association in Morristown, N.J. "Environmentally, it's the worst thing you could do at your wedding."

With confetti and rice frowned upon as environmentally incorrect, many couples choose butterflies as a green alternative. Dr. Robert Michael Pyle, the founder of the Xerces Society, an insect conservation group based in Portland, Ore., and an outspoken critic, said: "It's getting absolutely mad. People are making these butterflies into baubles."

Despite such objections, the butterfly breeding business is unlikely to go away soon. About 60 companies are in operation, many having sprung up in the last year or two, said Dr. Robert V. Flanders, senior entomologist at the United States Department of Agriculture in charge of regulation of butterfly releases. Tens of thousands of butterflies are being sold each season, with monarchs the most popular for weddings, at \$10 each or \$100 a dozen.

Scientists say the most serious threat to wild populations is the potentially rapid spread of disease.

Sonia Altizer, disease ecologist at the University of Minnesota in St. Paul and one of the few scientists studying monarch diseases, said, "In natural populations, there are all sorts of parasites present that aren't a problem until you do captive breeding at high densities in close quarters."

With dealers shipping the butterflies by overnight mail all around the country, a localized outbreak of disease could spread quickly. She added, "I'm definitely not in favor of releases."

But breeders interviewed are adamant that their colonies are clean. They say they regularly check for the best-known malady of monarchs: a devastating parasite named Ophryocystis, which can wipe out whole colonies.

"We run an extremely tight ship," said Jacob Groth, a recent college graduate who studied business and now owns one of the largest of the new companies, Swallowtail Farms, in Carmichael, Calif. "When diseases do come through, they are caught immediately and destroyed. A butterfly operation can't last too long if it's sending out diseased butterflies."

But most diseases of monarchs, scientists say, remain unknown or little understood, so that even the most conscientious breeders cannot diagnose or even recognize them.

Moreover, Ms. Altizer said, many people raise caterpillars on drugs that can suppress diseases caused by protozoa and bacteria but not eliminate them. When such apparently healthy butterflies are released, they can act as carriers, spreading disease.

At the same time, new diseases continue to appear. Dr. David Marriott, founder of the Monarch Program, a nonprofit research and education organization based in Encinitas, Calif., said he receives inquiries every week from various callers about diseases that are killing off monarchs. While most breeders have learned to deal with Ophryocystis, now another disease is plaguing those who are trying to raise monarch butterflies. Dr. Marriott said that he suspects it is a protozoan parasite known as Nosema.

Breeders point out that critics lack any hard data that show releases have damaged wild butterflies. "If I saw definite proof that shows this is hurting them, I would've stopped in a minute," said Rick Mikula, who sells butterflies through his company, Hole in Hand, in Hazleton, Pa.

But such proof will be difficult if not impossible to come by, given that once the butterflies are released, they are indistinguishable from wild butterflies. If commercial butterflies are spreading disease or corrupting scientific studies, they will probably do so without anyone's ever knowing.

With so many human-raised butterflies in the wild, researchers say it is already impossible to know whether butterflies they catch in the wild are from that area or from a wedding that took place nearby. Releases make it impossible to confidently study migration routes, the incidence of disease or such basic things as where different species of butterflies can be found. Unfortunately for biologists, the two most commonly released butterflies, monarchs and painted ladies, are two of

the few butterflies that actually have a migration pattern to study.

"It's unnecessarily muddling the biology of the monarch butterfly," said Dr. Lincoln Brower, a biologist at Sweet Briar College in Virginia who has studied monarchs for 20 years and published articles arguing against the release of monarchs.

In this battle, which both sides say is getting uglier, breeders find little that is compelling in such arguments.

"The chance of finding a butterfly that's been released is not enough to where it's worthwhile putting a bunch of people out of business and ruining something that is so special to a lot of people," Mr. Groth said.

Though butterfly enthusiasts, teachers and scientists have moved small numbers of butterflies and released them for years, the U.S.D.A. began to get involved only when commercial releases began to boom a few years ago.

Dr. Flanders has been criticized for regulations that breeders describe as "overbearing" and that conservationists say are too liberal. He tries to be conservative in what he will permit, Dr. Flanders said. In order to ship butterflies across state lines for release, breeders must obtain a permit from the U.S.D.A. Nine species are permitted for release.

"Something irretrievable can happen," said Dr. Flanders, referring to the devastating effects of events like the inadvertent introduction to the United States of gypsy moths, an insect that has decimated forests at various times. "If I make the wrong decision, it could impact this society for many centuries."

Breeders prefer to focus on the brighter side of things.

Balloons, confetti and birdseed are today viewed as just so much littering. Rice is not only difficult to clean up, but some fear that birds can be harmed when the rice they eat expands. The ads for breeders use phrases like "ecologically sound" and "enhance the environment" when describing butterfly releases.

"We wanted to get into a green business," said Gordon Laatz, who left the telecommunications business last year to begin breeding butterflies as Painted Sky Butterflies in West Bloomfield, Mich. "We might take two dozen butterflies out and then put five or six thousand back into the environment and give them a chance to replenish their numbers. I think it's alarmist to say we

shouldn't do it just because we don't know what the consequences are."

Most important, breeders say, are the many stories they hear of customers changed forever by a profound experience with released butterflies. Chris Hundley of Magical Beginnings in Los Gatos, Calif., who along with his partner was formerly in the computer business, said: "The thing I like best is the emotions, reactions and how much a butterfly can touch somebody. Butterflies are just

While there are a few fairly large businesses, most breeders work out of their garages or back bedrooms, with little overhead, and sell via the World Wide Web. Most people attribute the rapid growth of this cottage industry to Mr. Mikula, a former machinist who several years ago began giving seminars on raising butterflies. While Mr. Mikula said his seminars are more for butterfly lovers than entrepreneurs, many breeders and scientists say it has been his descriptions of the money to be made that have gotten so many started. A Web page advertisement for Mr. Mikula's next seminar, which costs \$195 for one day, describes butterfly farming as "a lucrative business opportunity." It adds, "Be prepared to be sold out at least a year in advance, every year."

Swallowtail Farms, Mr. Groth said, expects to sell nearly 10,000 monarch butterflies this season, priced from \$7 to \$9 each, double the sales from last year. John White, marketing director for Butterfly Celebration, of Shafter, Calif., which sells painted lady butterflies, said that in just a few years, the company had catered nearly 4,000 events.

But not everyone loves butterflies at weddings.

Rita Bloom, a wedding coordinator at Creative Parties in Bethesda, Md., described a wedding ceremony in which guests were asked to release butterflies. "It was horrendous," she said. "Some people didn't even want to touch them. There were black crows flying up overhead and people were convinced they were there for the butterflies. They were brown and looked like moths. Half were dead or dying. It was a disaster, an absolute disaster."

In the meantime, Dr. Flanders said legislation before Congress could create much stiffer penalties for rogue breeders, helping to enforce regulations in what is now largely an honor system. Individual states are clamping down as well. Arizona, Dr. Flanders said, has banned shipments of butterflies for release into the state.

But for the moment, more butterflies continue to flitter off in front of dewy-eyed wedding guests, and conservationists continue to stew.

Mr. Groth was optimistic. "These scientists are all focusing on protecting the monarch as if it were a helpless, weak little creature," he said. "It's hardy. It does just fine on its own."

But Dr. Brower, told of this argument, responded, "That's probably what people said about the passenger pigeon 100 years ago."

Photos: Butterflies were released at a wedding in Sonoma, Calif., top. A painted lady was freed in Lewisburg, W.Va., above. At right, butterfly breeders Michael Talesfore and Chris Hundley of Magical Beginnings in Los Gatos, Calif. (Photographs by Susan Spann for The New York Times)