

HEALTH SCIENCE



Learning Their Wings



This cosmopolitan painted lady has some lunch after being released.



ABOVE: Adrienne Pea, 12, and Paul Burris, 11, watch a butterfly just after it was released. RIGHT: Students get ready for the mass release.

Fifth-graders in the inner city raise butterflies and gain insights into the workings of nature

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On a recent hot, blustery afternoon just north of downtown, two classes of fifth-graders emerged from Ames Visual and Performing Arts Magnet School carrying boxes filled with a dozen butterflies that they had reared in their classrooms.

Like parents dropping off their youngsters for the first day of kindergarten, they carefully removed the butterflies — a dozen cosmopolitan painted ladies — and placed them on flowers that the insects are known to like. A few of the butterflies clung to the plants. But a few others took off, darting erratically and rising in the strong wind.

"It's going away," one of the students shouted as the first one fluttered off.

Yelled another: "Like 'yippee, I'm free.'"

"Maybe they're not hungry," said a third, already thinking of an explanation for why the butterfly turned its back on a ready-made food source.

The event was part of an unusual school project in the classrooms of teachers Evelyn Gordon and Emma Strong at Ames, 2900 Hadley Street. The 50 inner-city students gained insight into science and art as they examined the life cycle of the

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Tips For Planting Butterfly Garden

YOU DON'T have to be an expert to plant a successful butterfly garden. Here are some tips:

- Conduct a butterfly survey. Grab a butterfly field guide and find out what types of butterflies visit your neighborhood. Visit open, sunny areas, nearby meadows, vegetated ponds, unmowed roadsides and weed patches. Take notes on not only the species you identify but also the types of plants they are visiting.
- Design around the sun and wind. Butterflies are sun worshippers, and many of their food sources grow best in full sun. They also prefer still air. Include tall plants like phlox or hollyhock, which will serve as wind breakers.
- Provide a water source.
- Plant adult nectar sources. Among the easiest to grow: zinnias, marigolds, daisies, asters, coneflowers, chrysanthemums, phlox. A mixture of annuals and perennials will best meet your needs; strive to have something blooming from early spring to late fall.
- Furnish breeding and feeding grounds. These are the host, or larval, plants — such as milkweed, lead plant, thistles and pipevine — that the caterpillars eat.
- Avoid pesticides. Butterflies are extremely sensitive to these.

A word of caution: Flowers that produce large amounts of nectar attract

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This is the garden near Ames Elementary School, a real-life laboratory where schoolchildren freed their butterflies and now are watching their life cycle.

Monarchs May Be Scarce This Year

THE NUMBERS of monarch butterflies now migrating across the Midwest may be down sharply over last year.

The reason: A December blizzard killed millions of them on their winter perches in mountainous central Mexico.

Butterfly experts won't know until late June whether the storm significantly hurt populations of the monarch, but "it does not look good this year," said Lincoln Brower, an authority on the butterfly. He's based at the University of Florida in Gainesville.

The orange and black butterflies pass through the St. Louis region in late May or June on one of the animal world's greatest migrations.

— William Allen

Butterflies

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butterfly, studied its favorite foods and helped a St. Louis artist create a sculpture of that life cycle.

They hope the painted ladies will reproduce at their garden, lay eggs and build a butterfly population that will stay in the neighborhood.

"We'd like to have kids relate to small organisms and have a better appreciation of their surroundings," said Thomas Bratkowski, an insect expert who teaches biology at Maryville University.

The butterfly project is the brainchild of Bratkowski and his wife, Gloria. They're getting help from St. Louis sculptor Uriel Starbuck and the Whitaker Foundation. Starbuck's sculpture, called "Monument to the Monarch," shows the life cycle of the butterfly: egg, caterpillar, chrysalis and winged adult.

Butterfly gardens are rapidly gaining popularity around the country. People seem to love the idea of attracting butterflies to their own back yards, said Melody Mackey Allen, director of the Xerces Society, a Portland-based group dedicated to conservation of butterflies. Nurseries commonly stock butterfly-attracting plants. Many schools embark on butterfly gardening projects.

But butterfly gardens are uncommon in the inner city, Allen said. Yet, the Bratkowskis and a few others may be starting a trend there, too. She cited one that was put in last summer in a Washington, D.C., neighborhood.

"All the neighbors who shared an alley cleaned up the alley and the adjoining weedy areas, including a center triangle of trash and broken glass," Allen said. "They turned it into a butterfly garden, and by the end of the season counted 14 species of butterflies. The drug dealers are gone, and the alley has become a destination point for evening walkers and weekend strollers."

Butterfly gardens "change how people feel about their street or their balcony or the empty lot," she said.

A Garden For Jewels

They also change the way youngsters view nature.

The Ames School students started their project in April by planting flowers known to tempt the tongues of many butterfly species. The vacant lot at the corner of 11th Street and St. Louis Avenue now contains blanket flower, butterfly weed, pincushion flower, hollyhock and a dozen other so-called hostplants. The students cultivated some of these in their classrooms.

"They're not necessarily pretty to humans, but they provide either nectar for adult butterflies or foliage for caterpillars to feed on," Thomas Bratkowski said.

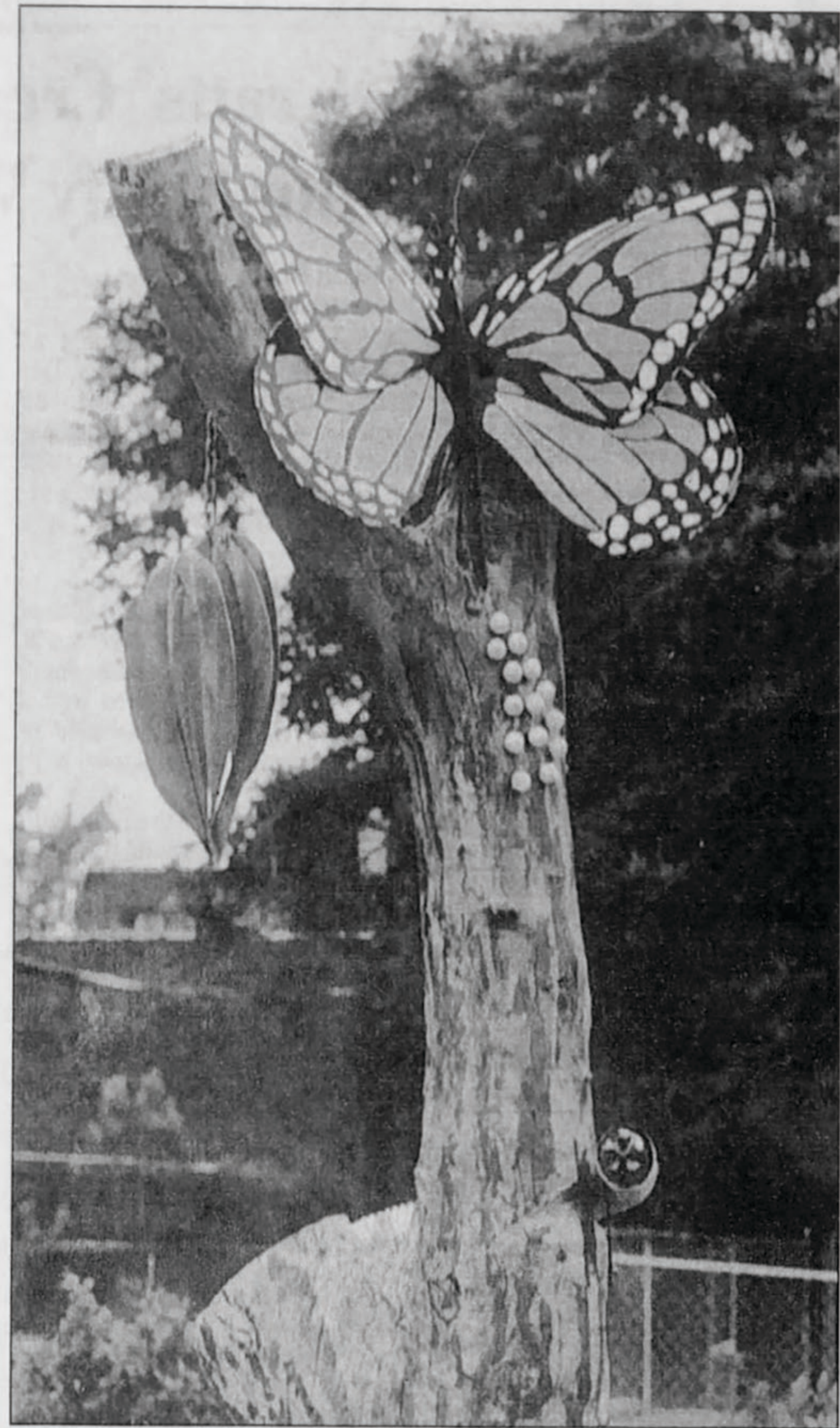
Bratkowski lives in the neighborhood and often volunteers to visit schools there to teach science. Last November, for instance, he took crickets to Clay School, also just north of downtown, to show students the harmful effects of nicotine. The experiment was part of the Great American Smokeout — the annual American Cancer Society effort to wean Americans from smoking.

Bratkowski got the idea for the butterfly garden while thinking about his passion — the world of insects.

"I'm always thinking of ways that people can relate to insects," he said. "I came up with the butterfly idea and talked it over with my wife. She thought we could do it."

Gloria Bratkowski wrote a successful grant proposal to the Whitaker Foundation. The butterfly garden is only a small part of the \$24,000 grant to the Old North St. Louis Restoration Group for a wide range of "greening" projects in the neighborhood.

The grant will help pay for eight neighborhood kids and a supervisor



A close-up of a monarch butterfly.

to maintain the garden over the summer.

"They'll work on Saturday mornings to keep things weeded, watered and hopefully going through the year," Thomas Bratkowski said.

In their classrooms in April, the children cared for two broods of painted ladies. Bratkowski bought the insects from a California firm that specializes in breeding butterflies and shipping the newly hatched caterpillars overnight to schools and butterfly houses.

The students studied the life cycle of the first brood as each matured into a chrysalis and emerged as an adult with orange, gray and black wings.

They learned how to identify several species of butterfly. They learned the basics of plant development from seeds to flower. And they learned how plants and butterflies depend on one another — the plants provide food and the butterflies help pollinate flowers.

The project piqued the students' interest in a way rarely seen in a classroom, said teacher Gordon. Each day when they entered the room, they ran over to see how "their" caterpillars had grown.

"They really liked this because they actually got to see it happening," Gordon said. "It gave them a good insight into how fast the caterpillars grow. Along the way they learned the scientific terms and about life."

Said Bratkowski: "It's very rare that kids get to see something go through its life stages. We're trying to create memories that they'll think about."

Garden

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bumblebees and honeybees as well as butterflies. If you're hypersensitive to bees, use plants with flower heads that contain small, multiple florets — lantanas, butterfly bush — rather than flowering shrubs like vitex.

Here are suggested books: "Butterfly Gardening," by the

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The students also began work on a caterpillar sculpture with Starbuck. The artist had already created a 4-foot-wide iron sculpture of an adult monarch. In late May, shortly after the students released the painted ladies, Starbuck mounted the adult, caterpillar, eggs and chrysalis to a driftwood-like stump in the middle of the garden.

Helping Out Nature

The students hope the garden will attract other kinds of winged jewels, including monarchs, clouded sulfur, spring azure, dogface sulfur, pearl crescent and tiger swallowtail.

Many of them said they enjoyed the butterfly project because they got to work with their hands and observe butterfly growth, not just read about it in a textbook.

"It was fun watching the butterflies emerge and letting them go," said Adrienne Pea, 12, watching several of the painted ladies still clinging to plants. "I'm happy about it, but I don't want them to get hurt or die."

Said Leander Perryman, 12: "This is beautiful because we're helping out nature — helping out the butterflies."

Katie Simpson, 10, plans to visit the garden from time to time this summer.

"I have to see if my flowers are OK," she said.

And the butterflies? "I'll see if they have any babies."

Xerces Society and Smithsonian Institution.

"Butterfly Gardening and Conservation," by the Missouri Department of Conservation.

"Butterflies and Moths of Missouri," by J. Richard Heitzman and Joan E. Heitzman.

The Kemper Center for Home Gardening at the Missouri Botanical Garden and Powder Valley Nature Center also have information on butterfly gardening.