



Powerful **Pollinators**

Concept Overview

Powerful Pollinators is a traveling exhibition produced and toured internationally by Flying Fish in collaboration with One Hive Foundation.

This exhibition is in development and subject to change.



A close-up photograph of a bumblebee on a red flower. The bee is positioned on the dark, textured center of the flower, which is surrounded by vibrant red petals. The background is a soft, out-of-focus green. The bee's body is covered in yellow and black stripes, and its wings are partially visible. The overall scene is brightly lit, highlighting the intricate details of the bee and the flower.

Follow the Flowers.

Pollination, which is responsible for much of Earth's essential biodiversity, including flowering plants, fruits, and vegetables that are essential to life, is made possible by pollinators—small in scale but enormous in impact.

Pollinators are a diverse group of species, ranging from honey bees—essential to commercial agriculture worldwide—to wild bees, other insects, birds, bats, and other mammals. All of these play a role in moving pollen through environments, supporting plant reproduction, ecosystem stability, and food security that humans and wildlife depend on.

The exhibition highlights the profound connection between humans and pollinators in our shared ecosystem, with a major spotlight on bees and their unique characteristics and behaviors. Visitors leave feeling a newfound kinship with pollinators and feel inspired to take actionable steps to create pollinator-friendly habitats in response to growing environmental pressures.



**Interdependence and Coevolution**

The story of pollination is one of deep and ancient connections between plants, pollinators, and people. Plants and pollinators have coevolved through a shared dependence on pollen, which, in turn, sustains biodiversity, ecosystems, and food systems around the world.

Resilience in Diversity

The extraordinary diversity of pollinators spans insect, reptile, bird, and mammal worlds, each species contributing in its own unique way to the diversity and resilience of the ecological niches they occupy.

Small Actions, Big Impact

Every pollinator, every flower, and every tiny grain of pollen are part of a global network that collectively sustains life on Earth. Each pollinator's behavior has enormous effects, shaping the plants, habitats, and food systems we all depend on.

Shared Ecosystems: Humans and Pollinators

The story of human civilization is inseparable from the story of pollinators and plants. Our health and survival are closely tied to those of pollinators, through food, agriculture, and the environment.

Stewardship and Responsibility

The choices made across communities, landscapes, and cities can have profound consequences for pollinators and for the future of the ecosystems upon which we depend. Individual and collective actions, from local gardens to global policy, can create pollinator-friendly habitats and support healthier ecosystems for generations to come.

How the Story Unfolds

The exhibition is structured around three interconnected themes that move from natural science to human responsibility.

The Science of Flowers explores how flowering plants evolved over millions of years, how pollen powers plant reproduction, and how flowers deploy color, scent, and structure to attract the pollinators they depend on.

Pollinators at Work expands this story to reveal the extraordinary diversity of pollinators—bees, other insects, birds, bats, and more—showing how each transfers pollen in its own way, forages across landscapes, and sustains the ecosystems it inhabits.

Our Shared Dependence examines how human food systems and wild ecosystems alike rely on healthy pollinator populations, and how habitat loss, pesticide use, and climate change are placing that relationship under increasing pressure.

Together, the themes build a narrative arc that connects the intimate biology inside a single flower to global biodiversity, agricultural systems, and the everyday choices that shape the future of both.



The Science of Flowers;
Pollination, Purpose, and Reproduction

Flowers

Coevolution
of flower and
pollinator
Where it all began
Fossil records
Flower diversity
Flower structure
and function
Color, scent, and
attraction

**Pollen and
Pollination**

Basics of plant
reproduction
From flower to fruit
What is pollen?
Diversity of pollen
Pollination process
Pollination types

Pollinators at Work;
Beyond the Hive

The World of Bees

Bee diversity	Resource collection
20,000+ species	Wax and hive materials
Seven main families of bees	Smell
Bee anatomy and physiology	Vision
Feeding	Navigation

Honey Bees (Apis)

Bee behavior
Communication
Hive mind
Building a home
Pollination process
Commercial pollination
Honey-makers
Bees and people

Wild Bees (non-Apis)

Bee diversity
Wild bee behaviour
Life cycles
Building a home
Pollination specialties

Other Pollinators

Beyond bees
How other animals pollinate
Pollination across
ecosystems
Adapted flowers and scents
Insect pollinators
Bird pollinators
Small mammals
Reptiles
Wind

Our Shared Dependence;
The Systems that Sustain Us

**Pollinators Under
Pressure**

Habitat loss
Loss of diversity
Pesticides
Colony collapse
disorder
Varroa Mite
Foulbrood
Climate change
Exploitation
Industrial
beekeeping

Restoring Balance

Are bees pests?
Reducing chemical
use
Activism and
advocacy
Green cities
Pollinator-friendly
gardens
Rewilding
Sustainable
agriculture
Local and small-
scale farming

Awe & Wonder
*Pollination is everywhere, supporting
life on Earth*

Revelation
*Plants and pollination evolved together,
shaping one another over time*

Emotional Bond
Bees and other pollinators display social structures and behaviors visitors recognize

Surprise & Delight
The remarkable diversity of pollinators is revealed

Concern Grounded in Understanding
*These interconnected systems are
under growing stress, effecting
ecosystems worldwide*

Empowerment & Kinship
*"I see myself in this system, and I know what
actions I can take to help."*



The Science of Flowers

Pollination, Purpose, and Reproduction

The story of pollinators is inseparable from the story of flowering plants. Over millions of years, these two groups of organisms have coevolved, altering their appearance, behavior, and structure for mutual benefit: for plants, reproduction; and for pollinators, food.

By examining how flowers evolved, how pollen works, and the many ways pollination occurs, this section invites visitors to understand and appreciate flowers as finely tuned biological systems—engineered to attract pollinators and essential to life on Earth.

Flowers

Flowers are the living interface between plants and pollinators. Through coevolved traits—color, scent, and structure—they are precision-built to ensure successful plant reproduction.

Over millions of years, this relationship has produced extraordinary diversity in flower form and function. Every petal, pattern, and perfume reflects an evolutionary solution to one question: how to attract the right pollinator at the right time.

Pollen and Pollination

Pollen carries plant genetic materials, transferred from flower to flower by wind, water, or pollinators' bodies. This process turns flowers into seeds, nuts, grains, fruit, and vegetables that sustain the ecosystems and the humans and animals within them.

From wind-blown grains to the precise vibrations of a bee in flight, plants have evolved remarkable strategies to move pollen, an exchange that underpins forests, farms, and biodiversity, linking pollinators, plants, and people in a shared biological cycle.

Pollinators at Work

Beyond the Hive

Pollination is an essential process that enables flowering plants to reproduce, sustaining the ecosystems that depend on them. This work is performed by a wide range of pollinators, each using different bodies, senses, and strategies to move pollen across landscapes. Other insects, birds, and even small mammals and reptiles all play a role in this interconnected system.

Bees are among the most important and most effective pollinators. From the solitary existence of the leaf-cutter bee to the complex social structure of the honey bee, bees represent an extraordinary diversity of forms and behaviors. Driven by their search for pollen and nectar, bees navigate the floral world by sight and scent; and by doing so, provide an essential ecosystem service: the pollination of flowering plants. Their bodies and behaviors have evolved over millions of years in tandem with flowering plants, shaping a mutual dependence that supports both.

Together, bees and other pollinators form resilient, interconnected networks that sustain ecosystems, agriculture, and life on Earth.

The World of Bees

Bees are the most diverse group of pollinators and among the most effective on Earth, with more

than 20,000 species adapted to different climates, flowers, and ways of life. From social colonies to solitary nesters, bees use extraordinary senses of smell, vision, and other unique navigational tools to locate flowers and return home. Their bodies are finely tuned for collecting and transporting pollen, making them central to the reproduction of flowering plants and the health of ecosystems worldwide.

Honey Bees (*Apis*)

Honey bees—members of the genus *Apis*—live in highly organized colonies built around cooperation, communication, and shared labor. Queens, workers, and drones each play distinct roles that keep the colony functioning. Through a unique language of dances, honey bees communicate the location of food sources and navigate across large landscapes with remarkable precision. Prolific pollinators of crops and wild plants alike, honey bees have become deeply woven into human agriculture and culture.

Wild Bees (non-*Apis*)

Wild bees—the thousands of species outside the *Apis* genus—live unmanaged in the wild. Most are solitary, nesting in soil, wood, or plant stems, and often prefer specific flower species. As highly

effective pollinators, particularly for native plants and various crops, their diverse shapes, sizes, and behaviors are vital for resilient ecosystems and sustaining long-term food security.

Nature's Other Pollinators

Pollination is not only the work of bees. Around the world, a remarkable range of creatures take part in this process, each in their own unique way. Hummingbirds collect pollen on their feathers as they use their long beaks to sip nectar from brightly colored blooms. Bats visit night-flowering plants for food, their fur dusted with pollen. Butterflies, moths and beetles move from flower to flower in search of nutrition, transporting pollen as they go. Even small mammals and reptiles are key pollinators for certain species of flowering plants by collecting and transferring pollen.

Each of these diverse species interacts with plants through different bodies, senses, and behaviors, pollinating in forests, deserts, grasslands, mountains, and at all hours of the day and night. This global network of pollinators shows that pollination is a dynamic system shaped by evolution and environment, and one that depends on far more than bees alone.



Our Shared Dependence

The Systems that Sustain Us

From the food we eat to the landscapes we live in, humans are deeply dependent on pollinators. Bees and other pollinators support global agriculture, biodiversity, and food security, forming connections between natural ecosystems and human societies that most people never see.

Yet pollinators face growing pressure from habitat loss, pesticides, disease, climate change, and industrial farming practices that disrupt delicate ecological relationships. By rethinking how we farm, build cities, and care for shared environments, we can reduce the pressures that pollinators face and create conditions where both pollinators and people can recover and thrive.

Pollinators Under Pressure

Pollinators worldwide face growing pressure from habitat loss, urbanization, and intensive farming—pressures that are driving the loss of flowers (bee forage) and nesting sites they depend on. Pesticides, parasites, and disease all contribute to bee declines by disrupting navigation, feeding, learning, reproduction, and colony health, while herbicides also reduce available forage.

Climate change shifts flowering seasons and reduces the availability of food at critical points in pollinators' life cycles. Together, these pressures reduce species diversity and destabilize ecosystems on which humans and wildlife depend for survival.

Taking Action

Reducing pesticide use, protecting native plants, and planting diverse flowers help rebuild food sources and nesting habitat. Cities can weave green corridors and pollinator-friendly parks into the urban fabric, while farms can adopt practices that work with nature rather than against it. Community action, policy, and everyday choices all matter.

Learning Goals

Foster a sense of kinship and connection to pollinators

Visitors will develop an emotional and intellectual connection to pollinators, recognizing them as vital, living partners in Earth's life-support systems rather than background.

Build understanding of pollination as a foundation of global food systems and human well-being

Visitors will understand how pollination supports agriculture, food security, and human livelihoods across cultures and regions.

Shift perceptions of plant biodiversity and flowers

Visitors will rethink the plant world and flowers as a rich diversity of active, highly evolved reproductive systems that shape ecosystems and sustain life on Earth.

Inspire action and agency in protecting pollinators

Visitors will leave feeling empowered to take practical, achievable actions that support pollinators and healthy ecosystems.

Present pollination through an international and inclusive lens

Visitors will understand pollination as a global process that transcends borders, cultures, and ecosystems.

Deliver an adaptable, universally designed exhibition experience

The exhibition will be accessible, flexible, and resilient across venues, audiences, and time.

Specifications

Scalable Design

5,000 sq ft (500 m²)

Scalable +/- 1,500 sq ft (150 m²)

Adaptable floor plans available

Production

Ten (10) days for installation

Seven (7) for deinstallation

Freight

Up to three (3) 53 ft trailers by land (estimated)

Up to three (3) 40 ft HC containers by sea (estimated)

Languages

American English

Latin American Spanish

Premiere

Summer 2027

Availability

Please inquire for availability



Production Partners



FLYING FISH

About Flying Fish

Flying Fish believes exhibitions can do more. For over twelve years, we've partnered with leading museums and science centers to create and tour extraordinary exhibitions. More than 13 million visitors worldwide have experienced our exhibitions, exploring science, history, culture, and beyond.

Our mission is to make exceptional, authentic content accessible to communities everywhere while generating new, sustainable revenue for our partners. Whether developing original concepts or adapting existing collections for international audiences, we're more than a service provider—we're a creative partner and industry ally, dedicated to expanding our clients' reach and impact.

For Museums. By Museums.

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About One Hive Foundation

The One Hive Foundation is a private foundation that supports nonprofit research and community partners through our mission to promote pollinator health and ecologically responsible agriculture. We advance this mission primarily by making grants that increase available data on the environmental impact of human actions, accelerate solutions that combine science, innovation, and respect for the environment, and support the next generation of diverse farmers who will carry ecologically responsible agricultural practices into the future. In addition to grantmaking, One Hive functions as a hub for sharing research findings, facilitating communication among partners and funders, and raising public awareness around pollinator health and sustainable agriculture.

One Hive is guided by five core values that shape our mission and strategic plan and are shared by our founder, advisors, and collaborators: science-based decision-making, inclusivity, community, collaboration, and family.

onehivefoundation.org

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