GLOSSARY
A-C

ALARM PHEROMONE: A chemical secretion from the worker bee that warns others of a threat to the hive. It smells like bananas.

APIARY: A place where bees are kept; a collection of bee hives.

APITHERAPY: The use of products derived from bees for medicine, including venom, honey, pollen, propolis, and royal jelly.

BEE SPACE: The crawl space needed by a bee to pass easily between two structures about 3/8 of an inch. If the space between any two surfaces in the hive is too small for a bee to pass through easily, the bees will seal it with propolis.

BEEBREAD: A hard-packed mixture of pollen, nectar, and enzymes from the bee.

BEE HIVE: A structure in which bees are kept, typically in the form of a dome or box. In nature, this may be a tree hollow.

BEESWAX: Waxy material produced by worker bees and used to build combs.

BROOD: The immature, developing bees. Includes all life stages of the bees before adult.

BROOD COMB: The comb dedicated to raising the brood.

CELL: A hexagonal shaped structure that holds brood and food. The cells are built wall-to-wall and make up the comb.

COLONY COLLAPSE DISORDER: A recent phenomenon where worker bees disappear from the hive. They abandon the honey and their queen.

COLONY: The term used to describe the group or "family" of bees within the hive that are socially organized around the queen bee. A colony can reach up to 80,000 bees.

COMB: The beeswax structure comprised of individual, hexagonal cells that are shaped within a frame or border.

GLOSSARY
D-M

DRONES: Male bees, whose main function is to fertilize the queens outside of their hive. Drones make up a very small percentage of the total colony. In the autumn drones are expelled from the hive by the female worker bees.

FOUNDATION: Thin sheets of beeswax imprinted with a pattern of honeycomb. The beekeeper installs these sheets into wooden frames as "starters" for the bees in making uniform combs.

FRAMES: The removable wooden structures, which are placed in the hive. The bees build their comb within them. The removable quality allows the beekeeper to easily inspect the colony.

GLOBAL WARMING: A gradual increase in the overall temperature of the earth's atmosphere generally attributed to the greenhouse effect caused by increased levels of carbon dioxide, chlorofluorocarbons, and other pollutants.

GUARD: Describes the worker bee that protects the hive from invaders or predators.

HIVE BEETLE: A small dark beetle that is a major threat to hive health, as they consume brood, pollen and honey. The beetle larvae can ruin the combs full of honey as they tunnel, defecate, and produce slime over them.

HONEY: The sweet, viscous product created by bees from nectar.

INTEGRATED PEST MANAGEMENT: An ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties.

LARVA: The grub-like, immature form of the bee, after it has developed from the egg and before it has gone into the pupa stage.

MONOCULTURE: Agriculture practice of growing one crop throughout a large area.

GLOSSARY
N-P

NATIVE BEES: Usually the best pollinators for plants that are native to the same region. Squash bees (Peponapis) and bumble bees (Bombus) are an excellent example of bees that pollinate plants native to the Americas.

NECTAR: Sweet fluid produced by flowers is 60% water and 40% solids. This is collected by the bees and converted into honey at 17%-18% moisture content.

NEONICOTINOIDS: A relatively new class of insecticides that share a common mode of action that affect the central nervous system of insects, resulting in paralysis and death.

NURSE: Describes the worker bee that cares for the brood.

PARASITE: An organism that lives in or on another organism (its host) and benefits by deriving nutrients at the host's expense.

PATHOGEN: A bacterium, virus, or other microorganism that can cause disease.

PHEROMONE: A chemical produced and secreted into the environment that prompts a social response within a species.

POLLEN: Very small dust-like grain produced by flowers. These are the male germ cells of the plant. This provides a protein source for the honey bees.

POLLINATION: The transfer of pollen from the anther (the male part) of one flower to the stigma (female) of another flower in the same species. This occurs by way of wind, honey bees, and other pollinating insects. This process ensures fertilization of the plant.

PROBOSCIS: An elongated sucking mouthpart that is typically tubular and flexible. Bees use their proboscis to extract nectar from flowers, like a using a straw.

PROPOLIS: Sticky, brownish gum gathered by bees from trees and buds, used to seal cracks and drafts in the hive. Also called "bee-glue." Propolis has anti-viral properties and is used medicinally.

PUPA: The immature form of the bee (following the larval stage) while changing into the adult form.

GLOSSARY
Q-Z

QUEEN PHEROMONE: Communicates the presence of the queen to the hive.

QUEEN: The only fertile female bee in a colony. She lays all of the eggs and serves as the central focus of the colony. There is only one queen in a colony of bees. A healthy queen's productive life span is 3-5 years.

ROUND DANCE: A circular dance that communicates a flower source is near the hive.

ROYAL JELLY: A jelly that is secreted from the glands in the heads of young nurse worker bees and is fed to all bee larvae. After three days, only the queen larvae will continue to be fed this special substance throughout her development.

Superorganism Example 1
Colony of honey bees that live to promote the health of the entire hive, as well as other hives.

Superorganism Example 2
Grove of Aspen trees whose roots are interconnected and shared.

SUPERORGANISM: A form of life composed of mutually interdependent parts that maintain various vital processes for the benefit of the whole. The well-being of the whole is more important than the individual.

SWARM: A queen and about half of her colony that have left the hive and are in the process of finding a new hive. The swarm is kept intact with the queen's pheromone.

SWARMING: The action of a colony finding a new home. This is how the honey bees expand their population.

VARROA MITE: A mite that attaches itself to the honey bee, usually on its back. If the bees are not mite resistant, this debilitating parasite can cause death in the hive.

WAGGLE DANCE: A complex dance that expresses the direction and distance of a flower source.

WORKER: A completely developed female bee that has developed ovaries but does not normally lay eggs. The workers do all of the work in the hive and forage for food. A worker's life expectancy is only several weeks during the active summer months; however, they can live for many months during the relatively inactive winter period.

ALARM PHEROMONE

A chemical secretion from the worker bee that warns others of a threat to the hive. It smells like bananas.

Photo Credit: "Fanning pheromones." by Microecos is licensed under CC BY-NC 2.0

THE BEE CAUSE PROJECT

APIARY

A place where bees are kept; a collection of bee hives.

Photo Credit: "Pastel Apiary" by Jay Mac 3 is licensed under CC BY-NC-ND 2.0

THE BEE CAUSE PROJECT

APITHERAPY

The use of products derived from bees for medicine, including venom, honey, pollen, propolis, and royal jelly.

Photo Credit: "Bed for api-therapy 8963" by Archnetwork is licensed under CC BY 2.0

THE BEE CAUSE PROJECT

BEE SPACE

The crawl space needed by a bee to pass easily between two structures about 3/8 of an inch. If the space between any two surfaces in the hive is too small for a bee to pass through easily, the bees will seal it with propolis.

Photo Credit: "Frames from Langstroth hive" by Butts Bees is licensed under CC BY-NC 2.0

THE BEE CAUSE PROJECT

BEEBREAD

A hard-packed mixture of pollen, nectar, and enzymes from the bee.

Photo Credit: https://www.keltronixinc.com/wp-content/uploads/2016/05/Bee-Pollen-to-bee-bread-EyesOnHives.jpg

THE BEE CAUSE PROJECT

BEE HIVE

A structure in which bees are kept, typically in the form of a dome or box. In nature, this may be a tree hollow.

Photo Credit: "Houghton Hall - Walled Garden - Herb Garden - Bee hive" by ell brown is licensed under CC BY 2.0

THE BEE CAUSE PROJECT

BEESWAX

Waxy material produced by worker bees and used to build combs.

Photo Credit: "Beeswax" by practicalowl is licensed under CC BY-NC 2.0

THE BEE CAUSE PROJECT

BROOD

The immature, developing bees. Includes all life stages of the bees before adult.

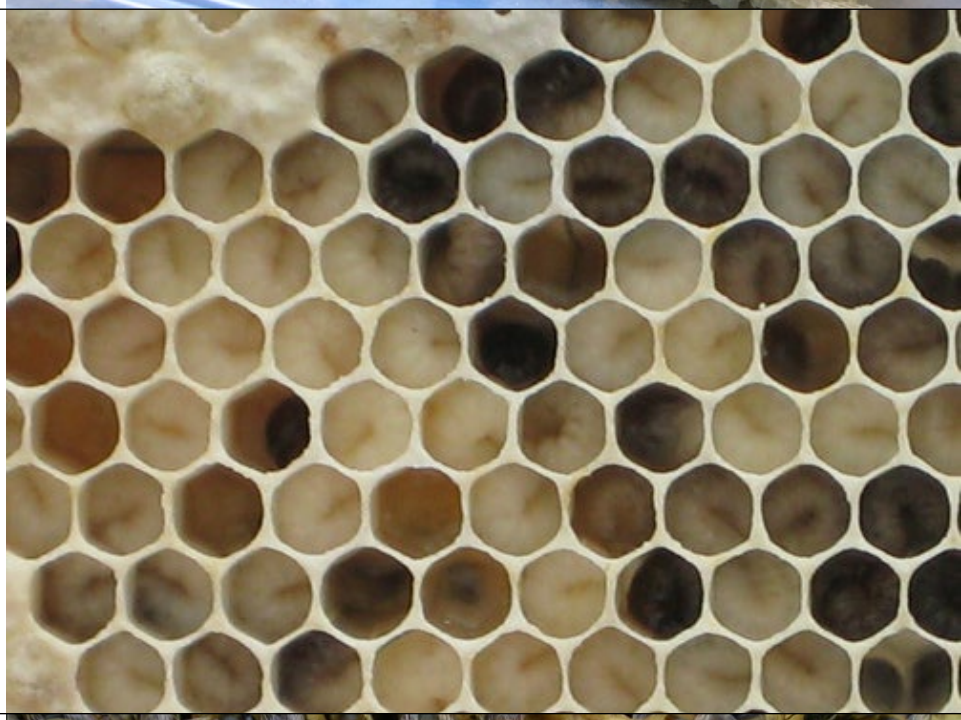

Photo Credit: "Bee Brood larvae" by aperte is licensed under CC BY 2.0

THE BEE CAUSE PROJECT

BROOD COMB

The comb dedicated to raising the brood.

Photo Credit: https://www.flickr.com/photos/rjleaman/39140482258/in/photolist-6XSwbE-6yFLm3-9NGpU4-5dCeGu-4AWq61-bDFbKs-bSzVjH-fwX1A-6TwTD7-yQkQu9-yA3wJG-xVC8pL-yA94K8-6zmNmU-6TsSMg-djVtUu-xVLzUc-g1afjr-6Ae2v3-eHynGW-9P5ZcY-eHsiGk-xcrJr7-c6ANud-6sbbPp-5dCeH5-6wmWEU-yA93BX-6zmPdE-dPqySA-6wmW8S-5D4K5k-6CjqqU-yA92XF-7UXMMe-6BSet7-7UXNgn-yREgyS-7V22o3-86X9mn-yTresF-yTrdCz-xVLCux-c6ANmN-c6ANEj-c6ANX7-c6AN3Y-iz2ez-c6ANdo-cfkH8S

THE BEE CAUSE PROJECT

CELL

A hexagonal shaped structure that holds brood and food. The cells are built wall-to-wall and make up the comb.

Photo Credit: "Honeycomb" by justus.thane is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

COLONY COLLAPSE DISORDER

A recent phenomenon where worker bees disappear from the hive. They abandon the honey and their queen.

Photo Credit: "Dead Bees" by wayneandwax is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

COLONY

The term used to describe the group or "family" of bees within the hive that are socially organized around the queen bee. A colony can reach up to 80,000 bees.

Photo Credit: "Honey Bee Swarm" by kaibara87 is licensed under CC BY 2.0

THE BEE CAUSE PROJECT

COMB

The beeswax structure comprised of individual, hexagonal cells that are shaped within a frame or border.

Photo Credit: "Honeycomb" by justus.thane is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

DRONES

Male bees, whose main function is to fertilize the queens outside of their hive. Drones make up a very small percentage of the total colony. In the autumn drones are expelled from the hive by the female worker bees.

Photo Credit: "Not long for the drones ..." by Max xx is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

FOUNDATION

Thin sheets of beeswax imprinted with a pattern of honeycomb. The beekeeper installs these sheets into wooden frames as "starters" for the bees in making uniform combs.

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Photo Credit: "bee-frame2" by nicephotog is licensed under CC BY-ND 2.0

THE BEE CAUSE PROJECT

FRAMES

The removable wooden structures, which are placed in the hive. The bees build their comb within them. The removable quality allows the beekeeper to easily inspect the colony.

Photo Credit: "Beekeeper taking out a new bee hive frame" by Ivan Radic is licensed under CC BY 2.0

THE BEE CAUSE PROJECT

GLOBAL WARMING

A gradual increase in the overall temperature of the earth's atmosphere generally attributed to the greenhouse effect caused by increased levels of carbon dioxide, chlorofluorocarbons, and other pollutants.

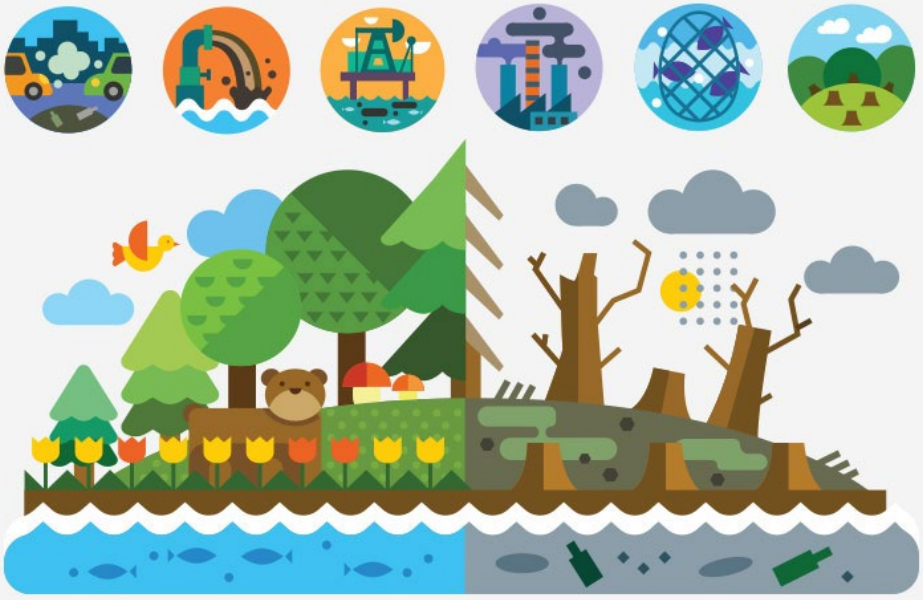

Photo Credit: "Calfing Glacier - Global Warming?" by Len Radin is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

GUARD

Describes the worker bee that protects the hive from invaders or predators.

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Photo Credit: "Italian Honey Bees at Hive Entrance I" by buildakicker is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

HIVE BEETLE

A small dark beetle that is a major threat to hive health, as they consume brood, pollen and honey. The beetle larvae can ruin the combs full of honey as they tunnel, defecate, and produce slime over them.

Photo Credit: "File:Small hive beetle.jpg" by James D. Ellis is licensed under CC BY 3.0

THE BEE CAUSE PROJECT

HONEY

The sweet, viscous product created by bees from nectar.

Photo Credit: "Farmer's Market" by Melissa Hillier is licensed under CC BY 2.0

THE BEE CAUSE PROJECT

INTEGRATED PEST MANAGEMENT

An ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties.

Photo Credit: "Gardening fighting pests with pests, not pesticide" by DES Daughter is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

LARVA

The grub-like, immature form of the bee, after it has developed from the egg and before it has gone into the pupa stage.

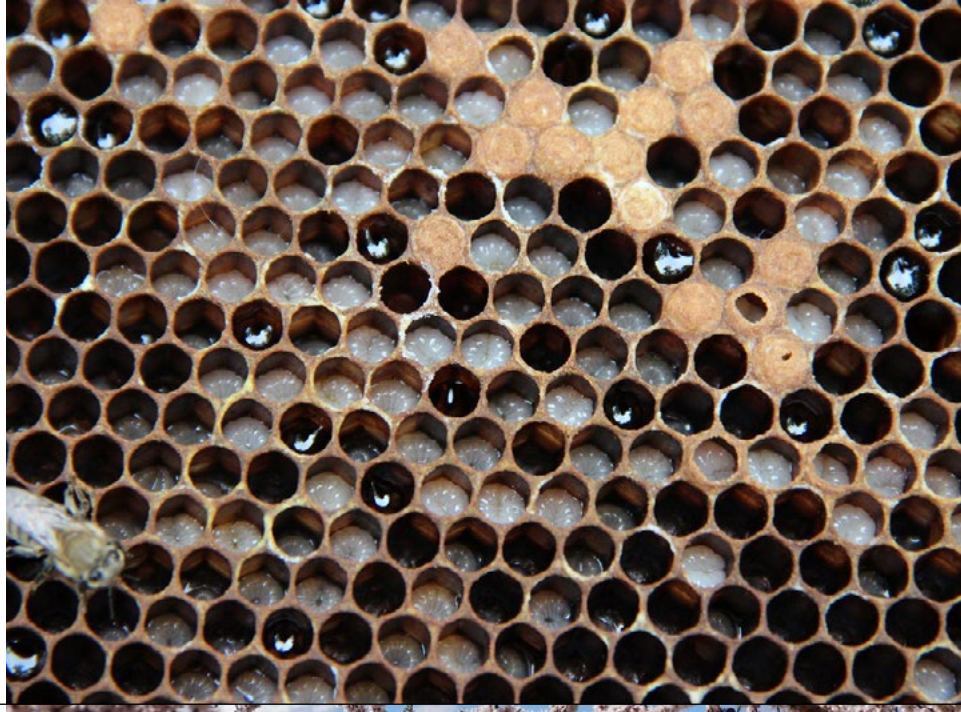

Photo Credit: "IMG_4704-bee-larvae" by dreamexplorer is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

MONOCULTURE

Agriculture practice of growing one crop throughout a large area.

Photo Credit: "Almond trees' field" by pepa_carbassa is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

NATIVE BEES

Usually the best pollinators for plants that are native to the same region. Squash bees (Peponapis) and bumble bees (Bombus) are an excellent example of bees that pollinate plants native to the Americas.

Photo Credit: "Bumble Bee" by MattX27 is licensed under CC BY-SA 2.0

THE BEE CAUSE PROJECT

NECTAR

Sweet fluid produced by flowers is 60% water and 40% solids. This is collected by the bees and converted into honey at 17%-18% moisture content.

Photo Credit: "Nectar" by Georgie Sharp is licensed under CC BY-NC 2.0

THE BEE CAUSE PROJECT

NEONICOTINOIDS

A relatively new class of insecticides that share a common mode of action that affect the central nervous system of insects, resulting in paralysis and death.

Photo Credit: "Let's Bee Clear" by greensefa is licensed under CC BY 2.0

THE BEE CAUSE PROJECT

NURSE

Describes the worker bee that cares for the brood.

Photo Credit: "Inside the hive" by rachaelbonoan is licensed under CC BY-NC 2.0

THE BEE CAUSE PROJECT

PARASITE

An organism that lives in or on another organism (its host) and benefits by deriving nutrients at the host's expense.

Photo Credit: "Varroa destructor on a bee nymph" by Gilles San Martin is licensed under CC BY-SA 2.0

THE BEE CAUSE PROJECT

PATHOGEN

A bacterium, virus, or other microorganism that can cause disease.

Photo Credit: "pathogens and parasites tile pink on grey" by _foam is licensed under CC BY-SA 2.0

THE BEE CAUSE PROJECT

PHEROMONE

A chemical produced and secreted into the environment that prompts a social response within a species.

Photo Credit: "A honey bee queen surrounded by her retinue (image by Helga Heilmann, BeeGroup Würzburg)" by dullhunk is licensed under CC BY-NC-ND 2.0

THE BEE CAUSE PROJECT

POLLEN

Very small dust-like grain produced by flowers. These are the male germ cells of the plant. This provides a protein source for the honey bees.

Photo Credit: "Macro Bee Pollen" by ForestWander.com is licensed under CC BY-SA 2.0

THE BEE CAUSE PROJECT

POLLINATION

The transfer of pollen from the anther (the male part) of one flower to the stigma (female) of another flower in the same species. This occurs by way of wind, honey bees, and other pollinating insects. This process ensures fertilization of the plant.

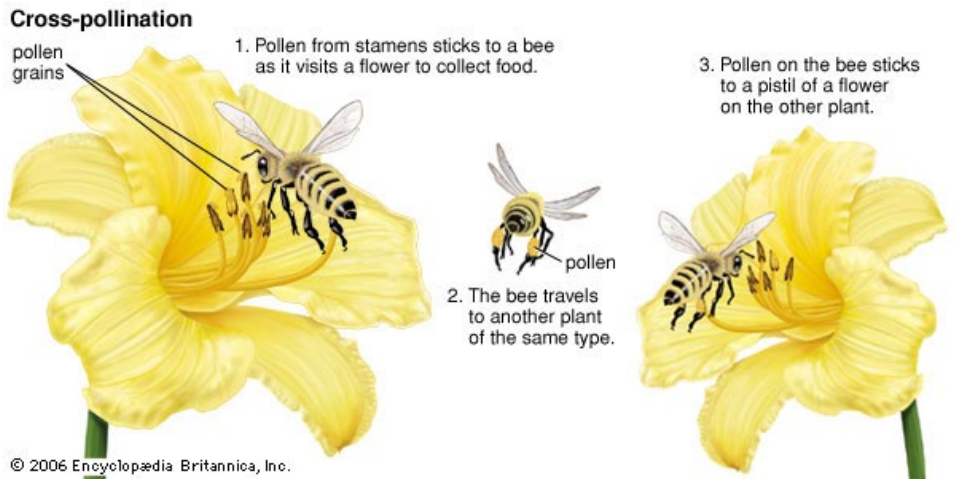

Photo Credit: https://cdn.britannica.com/88/95388-004-6E2508A9/process-cross-pollination-animal-pollinator.jpg

THE BEE CAUSE PROJECT

PROBOSCIS

An elongated sucking mouthpart that is typically tubular and flexible. Bees use their proboscis to extract nectar from flowers, like a using a straw.

Photo Credit: "Nectar so good..." by bob in swamp is licensed under CC BY 2.0

THE BEE CAUSE PROJECT

PROPOLIS

Sticky, brownish gum gathered by bees from trees and buds, used to seal cracks and drafts in the hive. Also called “bee-glue.” Propolis has anti-viral properties and is used medicinally.

Photo Credit: “Propolis” by OBA TTP is licensed under CC BY-NC-ND 2.0

THE BEE CAUSE PROJECT

PUPA

The immature form of the bee (following the larval stage) while changing into the adult form.

Photo Credit: “Apis melliferapupae 2_2019-09-06-19.23.35 ZS PMax UDR” by Sam Droege is marked with CC PDM 1.0

THE BEE CAUSE PROJECT

QUEEN PHEROMONE

Communicates the presence of the queen to the hive.

Photo Credit: “A honey bee queen surrounded by her retinue (image by Helga Heilmann, BeeGroup Würzburg)” by dullhunk is licensed under CC BY-NC-ND 2.0

THE BEE CAUSE PROJECT

QUEEN

The only fertile female bee in a colony. She lays all of the eggs and serves as the central focus of the colony. There is only one queen in a colony of bees. A healthy queen's productive life span is 3-5 years.

Photo Credit: "Queen Bee" by Kairon Gnothi (Opportunity Knocks) is licensed under CC BY-NC 2.0

THE BEE CAUSE PROJECT

ROUND DANCE

A circular dance that communicates a flower source is near the hive

Photo Credit: The Bee Cause

THE BEE CAUSE PROJECT

ROYAL JELLY

A jelly that is secreted from the glands in the heads of young nurse worker bees and is fed to all bee larvae. After three days, only the queen larvae will continue to be fed this special substance throughout her development.

Photo Credit: "Queen cell with royal jelly" by Gord Campbell is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

SUPERORGANISM

A form of life composed of mutually interdependent parts that maintain various vital processes for the benefit of the whole. The well-being of the whole is more important than the individual.

Photo Credit: "Wild bee colony" by 57Andrew is licensed under CC BY-NC-ND 2.0

THE BEE CAUSE PROJECT

SWARM

A queen and about half of her colony that have left the hive and are in the process of finding a new hive. The swarm is kept intact with the queen's pheromone.

Photo Credit: "Bees swarming" by Lars Plougmann is licensed under CC BY-SA 2.0

THE BEE CAUSE PROJECT

SWARMING

The action of a colony finding a new home. This is how the honey bees expand their population.

Photo Credit: "bees swarming" by hans s is licensed under CC BY-ND 2.0

THE BEE CAUSE PROJECT

VARROA MITE

A mite that attaches itself to the honey bee, usually on its back. If the bees are not mite resistant, this debilitating parasite can cause death in the hive.

Photo Credit: "varroa mite on bee with DWV" by Shawn Caza is licensed under CC BY-NC-SA 2.0

THE BEE CAUSE PROJECT

WAGGLE DANCE

A complex dance that expresses the direction and distance of a flower source.

Photo Credit: The Bee Cause

THE BEE CAUSE PROJECT

WORKER

A completely developed female bee that has developed ovaries but does not normally lay eggs. The workers do all of the work in the hive and forage for food. A worker's life expectancy is only several weeks during the active summer months; however, they can live for many months during the relatively inactive winter period.

Photo Credit: "The common Worker Bee" by williamcho is licensed under CC BY-SA 2.0

THE BEE CAUSE PROJECT