Animal and Plant Behaviour Glossary

Actogram	Graphical representation of an organism's activity during a day.
Auxins	A plant growth hormone that promote growth by cell enlargement/elongation in plants shoots and germinating seeds.
Batesian mimicry	A harmless organism copies the pattern of a dangerous organism to get protection.
Biological clock	The mechanism that produces regular periodic changes in behaviour or physiology due to an internal clock.
Chemotaxis	The directional movement of an animal in response to chemicals in the environment – e.g. Female mosquitos follow a carbon dioxide gradient towards their prey.
Circa	Rhythm of about …… e.g. circadian (about a day) etc.
Circadian rhythm	Behaviour in an organism which is approximately 24 hour a solar day.
Circalunar rhythm	Behaviour in an organism which is about 29½ day approximates the cycle of a lunar month.
Circannual rhythm	Behaviour in an organism which is approximately 365¼ day – the cycle of a solar year.
Circatidal rhythm	Behaviour in an organism which is about 12½ hour - approximates the cycle the tides.
Commensalism	An interaction/ relationship between two animal or plant species that live together in which one species benefits from the association while the other is not significantly affected. (+ and O) e.g. *E. coli* in the human gut.
Community	All plants and animals living in a defined area.
Competition	The interaction/ relationship between two or more organisms, populations, or species that share some environmental resource when this is in short supply. Both organisms are harmed (- -).
Complex hierarchy	Is a social structure in which each animal has a relative position of dominance e.g. baboons.
Cooperative breeding	A breeding system in which members of an extended family (usually older offspring from the same parents) all help in the rearing of offspring. E.g. Pukeko nest in communal groups where other pukeko help parents raise the young.

Cooperative defence	Where members of a group combine their strengths to defend against predators. E.g. Siberian musk ox, form a protective circle around their young when threatened by predators.
Courtship behaviour	Behaviour in animals that plays a part in the initial attraction of a mate or as a prelude to mating. These are often species specific.
Crepuscular animals	Animals that are most active at dawn and dusk.
Day neutral plants	A plant in which flowering can occur irrespective of the day length.
Dominance	Behaviour shown by an individual that is higher in a hierarchy than the individual it is relating with.
Endogenous	Rhythm controlled by an internal biological clock due to their DNA.
Entrainment	The resetting of the biological clock on a regular basis, forcing it to take up the period of the environmental cycle.
Environmental cues	A change in the external environment that triggers a change in behaviour or physiology.
Exploitation	An interaction between species in which one benefits by using the other as a source of food or shelter. (+ -).
Free running period	The period of a biological rhythm in the absence of external environmental cues.
Geotaxis	The directional movement of an animal in response to gravity – e.g. Shellfish such as Toheroa that burrow downwards into the sand exhibit positive geotaxis.
Geotropism	The directional growth of plant organs in response to gravity.
Herbivorism	Form of exploitation where one animal eats a plant (+ -).
Home range	An area that is occupied by members of a species to find food/ resources but is not defended.
Homing	The ability of an organism to find its way back to a specific area – e.g. Salmon returning to the river in which they were born for spawning.
Indoleacetic acid	A naturally occurring auxin, synthesised in the shoot tips and responsible for cell elongation in the plant stem.
Innate behaviour	Behaviour which is controlled by our biological clock/ DNA
Interspecific relationships	Interactions between different species.

Intraspecific relationships	Interactions between members of the same species.
Kinesis	The non-directional movement of an organism in response to a stimulus in which rate of movement depends on the intensity (rather than the direction) of the stimulus – e.g. A slater moves slowly in a damp atmosphere and quickly in a dry one.
k-strategy	A reproductive strategy where the parents produce few young and give them lots of parental care. Most young survive.
Learned behaviour	Behaviour not controlled by our biological clock/ DNA.
Linear hierarchy	Also called Dominance hierarchy: Ranked order of organism in a population from most dominant to most submissive.
Long day plants	A plant in which flowering can be induced or enhanced by long days (short nights), usually with more than 12 hours of daylight.
Migration	The seasonal mass movement of organisms from one area (breeding grounds) to another (feeding grounds) and back. It is usually a response to lower temperatures resulting in a reduced food supply and is often triggered by a shortening in day length.
Mullerian mimicry	Two or more poisonous species have similar colouration therefore get protection.
Mutualism	An relationship where two species both benefit from the relationship (+ +).
Nastic movements	Non- directional movements of plant in response to external stimuli – e.g. Opening of tulip and crocus flowers in response to increasing temperatures.
Navigation	Methods organisms use to find their way. Can be solar (sun compass) stellar (star maps) magnetic, ocean currents etc.
Negative tropism	A plant growth response away from a stimulus.
Nocturnal animal	Animals that are active at night.
Parasitism	A form of exploitation where one species lives on another to obtain food (+ -).
Period of activity	Time from the start of activity until start of activity again.
Phase shift	When light/ dark is altered, the phase shift is the amount by which the period alters.
Photoperiodism	The response of an organism to changes in day length (photoperiod).

Phototaxis	The directional movement of an animal in response to light – e.g. Certain algae can detect light using a sensitive eyespot and move to regions of higher light to enhance photosynthesis.
Phototropism	The directional growth of plant organs in response to light. Shoots usually grow towards light.
Phytochrome	A pigment that exists in two forms – Pr and Pfr. During the day Pr → Pfr and at night Pfr → Pr. If a plant is a LDP you will have high conc of Pfr and this will initiate flowering, while if a SDP high conc of Pr (low conc of Pfr) initiate flowering.
Pineal gland	Small pea shaped gland in the brain which acts as our timekeeper.
Predation	A form of exploitation where one animal hunts (predator) another animal (pray) for food.
r-strategy	A reproductive strategy where the parents use their energy to produce lots of offspring but give no parental care to the young (lots of young die early).
SCN	Suprachiasmatic Nucleus: cells in the brain which keep track of day and night length.
Short day plants	A plant in which flowering can be induced or enhanced by short days (long nights), usually with less than 12 hours of daylight.
Taxes	Directional movements of animals towards (+) or away (-) in response to external stimuli.
Territory	An area which an organism or a group of organisms utilise and actively defend.
Thigmotropism	The growth of an aerial plant organ in response to localised physical contact – e.g. Bean tendrils twining around a support.
Tropism	Directional growth of a plant towards (+) or away (-) from a stimulus.
Tropisms	Directional plant growth responses in response to external stimuli.
Zeitgeber	The environmental agent that resets the biological clock e.g. light, temperature.