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# Glossary of Scientific Terms

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## Glossary of scientific terms

All fields of science and travel have a vast amount of their own terminology and jargon, with biological science having more than most. Therefore, during our courses, you may encounter a great many new words. This very comprehensive list will assist you.

### A

<b>Aardvark</b>	An unusual, nocturnal mammal, specialising in ant-eating.
<b>Abdomen</b>	Rear body segment of an insect, or the posterior section of any other animal.
<b>Abiotic Factors</b>	Non-living components of an ecosystem e.g. Soil, water, sunlight.
<b>Abomasum</b>	The fourth compartment of a ruminant's stomach. It is the animal's true stomach; it is glandular and produces enzymes.
<b>Abscission</b>	Shedding leaves.
<b>Acacia</b>	Typical thorn trees, generally with a flattened crown.
<b>Acari</b>	An Order in Class Arachnida, ticks and mites.
<b>Acaricide</b>	Any chemical applied to animals specifically for the removal of ticks.
<b>Acclimation</b>	Morphological and or physiological changes that an animal or plant undergoes in response to the physical changes of its habitat.
<b>Acclimatisation</b>	Changes which occur in the physical conditions of an animal after being exposed to different natural environments.
<b>Adaptations</b>	Flexible structures that facilitate living organism's survival under given conditions e.g., camouflage.
<b>Aggressive Mimicry</b>	The resemblance of a predator or parasite, to a harmless species to deceive potential prey.
<b>Agonistic Behaviour</b>	A broad class of behaviour patterns including all types of attack, threat, appeasement and fight.
<b>Alates</b>	Winged, reproductive termites.
<b>Albinism</b>	A state caused by the absence of pigmentation in the body covering of an organism. The animal usually appears white with pink eyes.
<b>Alien (species)</b>	Describes a species that does not occur naturally in an area e.g., the Australian black wattle, <i>Acacia mearnsii</i> in South Africa.
<b>Alkaline</b>	Describing a liquid (usually) that has a pH above 7. It is the opposite of acidic, may be known as 'basic' or 'base'.
<b>Alkaloids</b>	The largest class of secondary plant compounds(chemicals).
<b>Allelochemistry</b>	The influence that chemicals secreted by a plant has on other organisms.
<b>Allo-grooming</b>	Grooming behaviour involving more than one animal.
<b>Allopatric</b>	Having different areas of geographical distribution, possessing non-overlapping areas.
<b>Allopatric speciation</b>	Speciation that occurs when an ancestral population of an organism becomes separated by some form of geographic barrier.
<b>Alluvial</b>	Material that has been transported by flowing water.
<b>Altricial</b>	Requiring care or nursing after birth. At birth, these animals are usually helpless, usually with eyes and ears closed and partially naked.
<b>Altricial</b>	Requiring care or nursing after birth. At birth these animals are usually helpless, usually with eyes and ears closed and partially naked.
<b>Altruism</b>	Act of assisting another animal at the expense of your own health or circumstances.

<b>Alum</b>	A substance used in licks to control tick infestation.
<b>Amber</b>	Fossilised tree resin.
<b>Amphibia</b>	The Class to which frogs and toads belong.
<b>Amphibious</b>	An organism that spends portions of its life both in and out of the water, e.g., hippopotamus.
<b>Anaerobic</b>	This refers to an environment devoid of oxygen. It is also frequently associated with a group of animals, for example, anaerobic bacteria, which describes bacteria that live in oxygen-free environments.
<b>Anaphylaxis</b>	The advanced state of allergic reaction characterised by cardiovascular distress, anaphylactic shock.
<b>Anaplasmosis</b>	Also called "gallsickness". A protozoal disease-causing fever and anaemia in cattle. Wildlife is generally carriers of the disease.
<b>Anemia</b>	Pale looking.
<b>Angiosperm</b>	Seed protected within an ovary; division of seed-bearing plants.
<b>Annual</b>	A plant that completes its lifecycle from germination to death in only one season.
<b>Antbear</b>	See armadillo.
<b>Antennae</b>	Sensory appendages found on the head of many arthropods specifically insects. Also known as 'feelers'.
<b>Anterior</b>	Toward the front.
<b>Anthelmintic</b>	A product which is used to remove worms from the digestive tract.
<b>Anthrax</b>	A highly contagious bacterial disease of wild and domestic animals.
<b>Anthropomorphic</b>	Human-centred; assigning human characteristics to non-human species.
<b>Anti-venom</b>	Drug administered intravenously to counter the effects of envenomation by snakes, scorpions, spiders and insects.
<b>Antibiosis</b>	The release of chemicals from the root of a plant that inhibits the growth of other plants adjacent to it.
<b>Antioxidant</b>	A chemical that destroys free radicals.
<b>Antiparasiticide</b>	Products applied externally to animals to control tick infestations.
<b>Apex</b>	Tip of a leaf, or the terminal point.
<b>Aphelion</b>	The furthestmost point of a planet's orbit from the sun.
<b>Apis</b>	This is the Generic name for bees in the Family Apidae. "Api" is from the Latin for bees, thus apiology, the study of bees, apiculture, the ecology of bees etc.
<b>Aposematic</b>	Warning colouration. Usually contrasting yellow, red or orange against black, it advertises the fact that the organism is either poisonous, toxic, distasteful or harmful in some manner, e.g. Bees.
<b>Aquatic</b>	Living in water.
<b>Arachnida</b>	The Class to which spiders, scorpions, ticks and mites belong.
<b>Arachnophobia</b>	The fear of spiders.
<b>Arboreal</b>	Living in or adapted to living in trees.
<b>Areola</b>	The apex of a mollusc shell.
<b>Argasid</b>	A group of ticks representing those tick species which have soft bodies.
<b>Arthropod</b>	An animal that has a segmented body and jointed legs and is covered in a hard exoskeleton, e.g., arachnids, myriapods, insects.
<b>Arthropoda (arthropod)</b>	An animal that has a segmented body and jointed legs and is covered in a hard exoskeleton, e.g. Arachnids, myriapods, insects.

<b>Artiodactyla</b>	Even-toed ungulates. Members of this mammalian order are characterised by either two or four weight-bearing toes on each foot. Examples include the antelope and warthogs.
<b>Aspect</b>	An object's fixed position in relation to direction E.g. North facing
<b>Assimilation</b>	The transformation or incorporation of a substance by organisms; absorption and conversion of energy and nutrient intake into constituents of an organism.
<b>Association</b>	A natural unit of vegetation characterised by its composition and often dominated by a species.
<b>Astrology</b>	Study of 12 principle star constellations and their relevance to mankind.
<b>Astronavigation</b>	The use of star constellations, the moon or other cosmic features to determine position and direction. Used by certain birds in long-distance migration
<b>Astronomy</b>	Study of stars, moons, planets, galaxies and other cosmic phenomena
<b>Ataxic</b>	The failure of muscular coordination, also known as ataxia or ataxy
<b>Atmosphere</b>	The layer of gas surrounding the earth
<b>Autecology</b>	Ecology of an individual organism or species
<b>Autotomy</b>	Voluntary breaking off part of the body by an animal to escape predation
<b>Autotrophic</b>	Self-nourishing, e.g., photosynthesis in green plants
<b>Aves</b>	The Class of animals distinguished by feathers and wings
<b>Avifauna</b>	Birds
<b>Avivorous</b>	Feeding on/ having a diet of birds.

**B**

<b>Babesiosis</b>	A protozoal disease transmitted by ticks and which infects the red blood cells of animals, causing fever and anaemia.
<b>Backburn</b>	A fire that is lit so that it burns into the wind, and therefore burns slowly. These fires are very hot and destructive. Also known as a hot burn
<b>Bacteria</b>	Simple microscopic organisms that live in soil, water, organic matter, or in the bodies of plants and animals
<b>Baculum</b>	An elongated body structure found in the penises of all carnivores except Family Hyaenidae. The purpose is to prolong copulation
<b>Baobab</b>	A very large and very long-lived tree indigenous to Africa. Scientific name: <i>Adansonia digitata</i> . This tree is thoroughly examined in the wildlifecampus Botany Module. It is also the WLC logo.
<b>Barbicules</b>	Tiny hooks that assist in keeping birds feathers together
<b>Barbs</b>	Hooks that assist in keeping birds feathers together. Assisted by barbicules
<b>Batesian mimicry</b>	When a non-harmful organism mimics a harmful organism E.g. A hoverfly that looks very like a honeybee
<b>BEVOL</b>	Biomass Estimates from Canopy Volume: a computer program used to calculate the amount of browse available to animals
<b>Benchmark</b>	A reference site subjectively chosen to represent a veld in excellent condition
<b>Besnoitiosis</b>	"Elephant skin disease" protozoal disease-causing skin deformations in cattle, wildlife tend to be carriers.
<b>Biennials</b>	Plants that have a two - year life cycle
<b>Bilateral Symmetry</b>	The symmetrical arrangement of a body so that only one plane of dissection will result in two mirror-image halves
<b>Biltong</b>	Dried and seasoned meat. Known as 'jerky'
<b>Biodiversity</b>	Describing the diversity of living organisms within a defined community or location, with reference to their numbers
<b>Biogeography</b>	The study of the geographical distribution of organisms, both past and present
<b>Biology</b>	The study of living things
<b>Biomass</b>	The total weight of all the organisms in an ecosystem or in a portion of it
<b>Biome</b>	A region or set of regions having characteristic climatic or geographical conditions which determine specific species composition. E.g. Savanna, forest, grassland.
<b>Biosphere</b>	The entire living component of the planet; it covers almost all the earth and the atmosphere
<b>Biotic Factors</b>	That part of the total environment of an organism which is formed by its interrelationships with other organisms
<b>Bipedal</b>	Walking on two legs
<b>Biuret</b>	A non-protein nitrogen source included in licks as a protein supplement
<b>Bloat</b>	A condition whereby gases caused by ruminating become trapped inside an animal, and the animal begins to swell. The condition may lead to death
<b>Block burning</b>	A burning programme whereby a fixed pattern of different blocks of vegetation are burnt regularly.

<b>Blousuurvergiffing</b>	Prussic acid poisoning
<b>Bog</b>	A wetland ecosystem characterised by the accumulation of peat, acid conditions, and the dominance of sphagnum moss
<b>Bolsters</b>	Humps placed at angles in roads to prevent water from collecting on the road surface
<b>Boma</b>	An enclosure
<b>Bond pair</b>	Strongly attached male and female life partners, found in many bird and mammal species
<b>Bone meal</b>	Crushed bone, used in supplementary feeding
<b>Boreal Forest</b>	Needle-leaved evergreen or coniferous forest bordering sub-polar regions; also called Taiga
<b>Boss</b>	The thickened central portion of the horns of ungulate species
<b>Bottleneck Effect</b>	Genetic phenomenon referring to a population of animals which have developed from a small basal population
<b>Botulism</b>	A bacterial disease characterised by progressive paralysis
<b>Bovine Malignant Catarrhal Fever</b>	A viral disease causing nasal discharge and frequently death. Wildebeest tend to be carriers of the disease
<b>Breeding</b>	The generating, bearing and raising of offspring
<b>Browse</b>	The edible leaves of trees and shrubs
<b>Browse unit</b>	A kudu weighing 140 kg that only eats leaves (browse)
<b>Browser</b>	Any animal that eats predominantly browse material
<b>Browser Unit (BU)</b>	A unit of measure used to equate all browsers. Defined as a kudu of 140 kg which browses exclusively
<b>Brucellosis</b>	A bacterial disease which causes animals to suffer abortions
<b>Bryophytes</b>	A group of no vascular plants e.g. Moss and liverworts
<b>Bulk feeder/grazer</b>	An animal that consumes a large amount of grass and does so without selecting specific species
<b>Bulk Grazer</b>	A grazing animal that is non-selective regarding species and length of grass grazed
<b>Bush Encroachment</b>	An increase in shrub, thicket or tree growth to the detriment of valuable grazing areas. Thus, may be caused by overgrazing

C

<b>Caecum</b>	A specialised portion of the lower / large intestine
<b>Calcification</b>	Process of soil formation characterised by an accumulation of calcium in the lower horizons
<b>Calliphoridae</b>	The fly family representing the metallic blue and green coloured flies which feed on carcasses
<b>Calving rate</b>	The rate of juveniles born to a game population per year after all births. It is expressed as a % of the population
<b>Camouflage</b>	The way that an animal's skin colour and texture blend with the surroundings
<b>Canine</b>	The tooth immediately posterior to the incisors
<b>Cannibalistic</b>	The practice of eating members of the same or similar species, e.g. File snakes
<b>Capture myopathy</b>	An unnatural and life-threatening state; characterised by a variety of seemingly unrelated symptoms caused by various od capture-related factors; significantly stress.
<b>Carapace</b>	The upper portion of a Chelonia shell
<b>Carcinogen</b>	A chemical substance that is linked to causing cancer
<b>Carnassial (teeth)</b>	The last upper premolar and first lower molar that fit together in a shearing surface. A defining characteristic of carnivores
<b>Carnivore</b>	Meat eater, either predator or scavenger
<b>Carrion</b>	Dead or decaying bodies of animals
<b>Carrying Capacity (ecological)</b>	The number of animal units an area can support
<b>Caste (system)</b>	A division of labour within a social insect society, i.e. Workers, soldiers, guards, nursery workers e.g. Termites, ants and certain bee species
<b>Catalogue auctions</b>	Selling game in an auction format, animals are not on display.
<b>Catena</b>	A soil profile and slope which has developed from a single parent material from crest to valley
<b>Ceacum</b>	A portion of a mammalian colon
<b>Cell</b>	The smallest unit of living matter
<b>Cellulose</b>	A form of plant tissue, difficult to digest
<b>Cephalization</b>	The concentration of sense organs, nervous control, etc., at the anterior end of the body, forming a head and brain, both during evolution and in the course of an embryo's development.
<b>Cephalothorax</b>	The fusion of the head and thorax of arachnids
<b>Character Convergence</b>	Evolution of similar appearance or behaviour in unrelated species
<b>Character Divergence</b>	Evolution of behavioural, physiological or morphological differences among species occupying the same area, brought about by selective pressure of competition
<b>Chelicerae</b>	Mouthparts of spider's 'fangs'
<b>Chelonia</b>	Reptilian order containing the tortoises, terrapins and turtles
<b>Chemotropism</b>	The growth of a plant in response to chemical stimulus
<b>Chilopoda</b>	Centipedes
<b>Chitin</b>	The tough component of an exoskeleton
<b>Chitons</b>	The common name for molluscs belonging to the Class: Polyplacophora
<b>Chlorophyll</b>	A chemical found in the leaves of plants that facilitate photosynthesis and provide leaves with their green colouration

<b>Chordata</b>	Animals with a backbone/spine
<b>Chromatophores</b>	Specialised skin cells that produce different colour pigments
<b>Classification</b>	Any method of arranging living organisms into a systematic order
<b>Climax Community</b>	A plant community, where no significant change in species composition has taken place within the previous 500 years
<b>Cloaca</b>	A common orifice for the release of digestive, excretory and reproductive material and waste
<b>Co-evolution</b>	Joint evolution of two or more non-interbreeding species where the evolution of one species in the relationship is partially dependent on the evolution of the other.
<b>Co-existence</b>	Two or more species living together in the same habitat, usually with some form of competitive interaction
<b>Coccidiosis</b>	A protozoal disease characterised by severe diarrhoea in especially captive animals
<b>Coleoptera</b>	The order of insects which includes beetles
<b>Colloid</b>	Tiny particles suspended in a continuous medium
<b>Colostrum</b>	The first milk that a young animal receives from its mother, rich in antibodies, protein and energy,
<b>Columella</b>	The central pillar on which the whorls of a mollusc's shell are deposited
<b>Commensalism</b>	A relationship between two species where the relationship is beneficial to one but is neutral or of no benefit to the other
<b>Community</b>	Different populations that live in a common area and affect one another
<b>Competition</b>	The demand for organisms within a community for the same resources, when this is in short supply
<b>Competitive Exclusion</b>	This hypothesis deals with the issue that when two or more species coexist using the same limited resource, one species must displace or exclude the other
<b>Compound Eyes</b>	The normal eyes of adult insects, consisting of many facets
<b>Compound Leaf</b>	A single leaf that consists of many leaflets
<b>Condensed tannins</b>	Tannins which form complexes with proteins, thus hindering fermentation and digestion
<b>Conservation</b>	The structured use and planned management of the earth's natural resources
<b>Conspecific</b>	Of the same species
<b>Consumptive use of game</b>	Hunting and fishing
<b>Contact carrier</b>	An animal which has not developed symptoms after exposure to a disease, but is a source of infection
<b>Convalescent carrier</b>	An animal that has recovered from clinical symptoms but is still a source of infection
<b>Convergent Evolution</b>	The development of similar characteristics in different species living in different areas but under similar environmental conditions
<b>Coppicing</b>	The controlled removal of vegetation in response to a habitat management plan
<b>Coprophagy</b>	Ingesting faeces and other waste products
<b>Copulation</b>	Act of mating whereby the male's sperm is deposited into the female's reproductive organs
<b>Corridor Disease</b>	Theileriosis



<b>Corynebacterium</b>	A group of bacteria species causing infections through wounds
<b>Courtship</b>	Ritualised activity between male and female conspecifics as a prelude to mating
<b>Crepuscular</b>	Active at sunrise and sunset
<b>Cropping</b>	The steady removal of a predetermined number of animals over an extended period, usually in response to a habitat management plan
<b>Crown</b>	The shape made by the upper branches and leaves of a tree
<b>Crustacean</b>	A group of Arthropods having a hard-outer shell, are usually aquatic and are gill breathing, e.g. Shrimps, crabs etc
<b>Culling</b>	Controlling game populations by shooting
<b>Cursorial</b>	Species that wander around in search of prey
<b>Cyclone</b>	The term for a hurricane in the Southern Hemisphere
<b>Cytauxzoonosis</b>	Protozoal disease like theileriosis also called East Coast Fever
<b>Cytotoxic</b>	The venom type that causes localised tissue damage at the site of envenomation, usually associated with intense pain and marked swelling.

**D**

<b>Danckwerts Equation</b>	The equation used to calculate grazing capacity based on veld condition and rainfall.
<b>Death Rate</b>	The percentage of individuals in a population dying in a specified time interval
<b>Deciduous</b>	Trees or shrubs that lose their leaves every year
<b>Decomposer</b>	An organism that obtains energy from the breakdown of dead organic matter to more simple substances; more precisely refers to bacteria and fungi
<b>Decreaser</b>	A grass species that is dominant in good veld but is replaced by other species when the area is under- or overgrazed.
<b>Defoliation</b>	Plants losing their leaves
<b>Density Dependent</b>	Varying in relation to population density
<b>Density Independent</b>	Unaffected by population density
<b>Desiccation</b>	Drying out, losing all moisture content
<b>Detritivore</b>	An organism that feeds on dead organic matter; usually applies to detritus feeding organisms other than bacteria and fungi
<b>Dextral</b>	Right-handed or pertaining to the right
<b>Diapause</b>	A period of arrested growth and activity in which metabolism is greatly decreased; usually seasonal in nature and common among insects
<b>Digestible energy</b>	Energy made available to the animal through the digestion process
<b>Digestion</b>	Process of fermentation and uptake of nutrients in the digestive system.
<b>Digit</b>	A finger or toe in mammals
<b>Digitigrade</b>	An animal that walks on its toes, characteristic of all dogs and cats
<b>Dimorphic</b>	A species that has two distinctly different body forms, most frequently due to different genders i.e. Sexual dimorphism. E.g. Humans are distinctly sexually dimorphic, zebra are not.
<b>Dioecious</b>	A plant species that has separate flowers for each sex, i.e. It has male flowers and female flowers
<b>Diplopoda</b>	Millipedes
<b>Diptera</b>	The order which includes flies
<b>Dispersal</b>	The spreading of seeds by wind, water, animals etc
<b>Dispersion</b>	Distribution of organisms in a given area
<b>Displacement Activity</b>	The performance of a behaviour pattern different from its normal functional context of behaviour
<b>Display</b>	A technique used by birds to send a signal to another bird by means of a pose, movement, sound, or combination of these, to get a response
<b>Distemper</b>	A viral disease, causing flu-like symptoms in canids
<b>Distribution</b>	The area in which a given species is likely to be found
<b>Disturbed Area</b>	An area that has been dug up, altered by man, or heavily overgrazed
<b>Diurnal</b>	Active during the day
<b>Diversity</b>	The difference, the range of species in a given area
<b>Dominance hierarchy</b>	A social system whereby animals of the same species are ranked, and behave accordingly

<b>Dominant</b>	A population possessing ecological dominance in a given community and thereby governing the type and abundance of other species in their community
<b>Donga</b>	Hole of various dimensions usually due to the act of erosion
<b>Dormant</b>	The state of cessation of growth and suspended biological activity during which life is maintained
<b>Dorsal</b>	On or referring to the back
<b>Drift</b>	The term is given to soils which develop from previously weathered material
<b>Dronksiekte (drunk disease)</b>	Plant poisoning disease with symptoms of severe shivering in animals
<b>Dung</b>	The faeces or droppings of herbivores
<b>Duplex</b>	Type of soil where sandy topsoil overlies a swelling clay
<b>Dynamic</b>	Constantly changing
<b>Dynamic equilibrium</b>	Regarding plants, a community where change is constant, but the effects are not cumulative.

**E**

<b>Ecdysis</b>	Emergence from a cocoon or pupa.
<b>Echo-location</b>	Used by bats; the sending and receiving of ultra-high frequency sound emissions to determine the exact location of an object or organism
<b>Ecological Capacity</b>	The ability of vegetation to support animals and maintain them in a healthy and reproductive state, without the deterioration of the vegetation in the long-term
<b>Ecological Index Method</b>	A method used to determine the veld condition of an area, using the ecological status of grasses
<b>Ecological Niche</b>	That portion of habitat that a specific species has become uniquely adapted to.
<b>Ecological Status Class</b>	Classification of grasses based on their reaction to grazing pressure.
<b>Ecology</b>	The study of the inter-relationships between all organisms and their environment
<b>Ecosystem</b>	A definable ecological area in nature, consisting of all living and non-living components
<b>Ecotone</b>	A boundary between two plant communities of a major rank
<b>Ecotourism</b>	The purposeful travel to a specific location to experience natural phenomena and local culture
<b>Ecozone</b>	An area with similar geology, rainfall, land shape and therefore its own unique combination of plants and animals
<b>Ectoparasites</b>	A parasite that lives on the outside of an organism
<b>Ectothermy (ic)</b>	A state of being dependent on the environmental temperature for body heating. These organisms exercise thermoregulation to keep their temperature at the optimum level
<b>Edaphic Factors</b>	Relating to soil
<b>Edentates</b>	The Order of mammals representing the sloths, armadillos and anteaters
<b>Effluent</b>	A substance that flows out, e.g. Pollution or waste materials into rivers or seas
<b>Egestion</b>	The elimination of undigested food material through the mouth
<b>EIA</b>	Environmental impact assessment
<b>Eluviation</b>	The movement of soil material from one horizon to another
<b>Endangered</b>	Under threat of becoming extinct
<b>Endemic</b>	An animal or plant to a given area
<b>Endoparasite</b>	A parasite that lives inside an organism
<b>Endoskeleton</b>	A skeleton situated interior to the muscles, e.g. All vertebrates
<b>Endothermy (ic)</b>	The regulation of internal body temperature independent of the external temperature
<b>Energy Flow</b>	The flux of energy originating with the process of photosynthesis from sunlight through to plants, herbivores, etc
<b>Energy Method</b>	A technique used to determine grazing capacity
<b>Entomology</b>	The study of insects
<b>Envenomation</b>	The transmission of venom into an organism, usually through the venomous animal's bite or sting
<b>Environment</b>	The external conditions (soil, water, air, etc) and other organisms surrounding a living thing

<b>Environmental Audit</b>	The assessment of how well an environmental body is performing at its allotted task
<b>Epidemiology</b>	The study of a disease as it progresses through a population
<b>Epidermis</b>	The outer most layer of an organism
<b>Epiphragm</b>	A mucous layer secreted by the pedal glands of terrestrial Molluscs, covering its foot and shell opening, preventing desiccation
<b>Epiphyte</b>	Plants that grow while attached to another species of plant to gain a more beneficial position, e.g. Tree orchids
<b>Epoch</b>	A very long segment of time
<b>Equilibrium Species</b>	A species whose population exists in equilibrium with the resources and at a stable density
<b>Erosion</b>	An ongoing natural process caused by weathering, transporting and depositing of the earth's surface by wind, water, other natural forces or human and animal influence
<b>Escarpment</b>	The Eastern Transvaal escarpment is the steep break between the Highveld and the Lowveld
<b>Esophagus</b>	Food pipe. The structure that directs food from the mouth to the stomach
<b>Estimation Method</b>	A technique used to determine grazing capacity
<b>Estrus</b>	See oestrus
<b>Estuary</b>	The location where a river flows into the ocean and the segment of that river that is affected by the ocean, in terms of tidal and saline influence
<b>Ethology</b>	The study of animal behaviour
<b>Etiolated</b>	The loss of chlorophyll from a plant due to it being blocked from the sun for a prolonged period Grass yellowing = etiolated grass
<b>Eutrophic</b>	A term applied to a body of water with high nutrient content and high productivity
<b>Evapotranspiration</b>	The amount of water lost via evaporation and transpiration from an area
<b>Evergreen</b>	A plant that does not shed its leaves with a change of season
<b>Evolution</b>	A theory which maintains that organisms have their origin in previously existing forms
<b>Exfoliation</b>	The removal of a surface layer from an object or organism
<b>Exoskeleton</b>	The hard outer shell of an insect or other invertebrates
<b>Exotic</b>	Not indigenous, introduced from abroad
<b>Extant</b>	Not extinct, still living
<b>Extinction</b>	The dying out of a species

**F**

<b>Facultative anaerobes</b>	Bacteria that can live in both oxygen-rich and oxygen-poor environments
<b>Faecal energy</b>	The energy lost during defecation, heat and undigested food
<b>Faeces</b>	Dung or droppings
<b>False hooves</b>	Protrusions on the legs of some ungulate species above the fetlock, they are the remnants of fused and reduced leg bones
<b>Fauna</b>	All animal life
<b>Fecundity</b>	The number of offspring or eggs produced
<b>Fecundity (fecund)</b>	A measure of the fertility of an organism. A highly fertile individual is said to be very fecund.
<b>Feline Immunodeficiency Virus (FIV)</b>	A viral disease affecting felines. It is like the HIV strain but with less severe symptoms.
<b>Feral</b>	Wild, escaped from domestication and returned to a wild state
<b>Fermentation</b>	The breakdown of food in the rumen or caecum.
<b>Fermentation heat</b>	Energy lost as heat during the fermentation process.
<b>Fertilisation</b>	The combining of female and male genetic material to reproduce a new individual
<b>Fertility</b>	The potential to produce offspring
<b>Fibrosity</b>	The fibre content of plant material
<b>Fire break</b>	A section of land, wide enough to halt the spread of fire. The break may be artificial such as a road, or a strip of vegetation may be back-burnt to produce a temporary fire break
<b>Fire mosaic</b>	A burning programme where a single fire is started in a random area and is left to burn itself out. This is an attempt to simulate natural (lightning) fires.
<b>Fitness</b>	The genetic contribution of an individual's descendants to future generations
<b>Flatulence</b>	The gas given off via the rectum
<b>Flavenoids</b>	The largest group of secondary chemicals (toxins) produced by plants. Includes tannin
<b>Fledgling</b>	A juvenile bird that is ready to leave its parents nest
<b>Flehmen</b>	An act performed by many species of mammals whereby an adult male sniffs the vulva and urine of a female to test if she is in oestrus. Some females also perform this ritual
<b>Flora</b>	All plant life
<b>Flux</b>	A flow of energy from a source to a destination
<b>Fomites</b>	Inanimate objects on which pathogens can be conveyed e.g. Faeces
<b>Food Chain</b>	The flow of energy from plants to herbivores to carnivores
<b>Food Web</b>	The interlocking pattern formed by a series of interconnecting food chains
<b>Forb</b>	Any herbs other than a grass
<b>Forcípules</b>	Appendages on the first segment on centipedes that convey venom to the tip of the animal's sharp claws
<b>Foregut fermenters</b>	Ruminants. Animals that 'chew the cud'
<b>Formation</b>	A classification of vegetation based on dominant life forms
<b>Fossil</b>	An impression left in hard rock of the shape, size and texture of a once-living organic organism or part of an organism, plant or animal

<b>Fossil Fuel</b>	Coal, oil or natural gas
<b>Fossorial</b>	Adapted to digging / an underground lifestyle
<b>Free radicle</b>	Harmful oxygen-containing compound
<b>Frugivore</b>	An animal that eats fruit
<b>Fuel load</b>	The relative mass of vegetation to be burnt
<b>Fungus</b>	Plants that do not contain chlorophyll e.g., mildew, mould, and mushrooms
<b>Fusiform</b>	Cigar-shaped
<b>Fynbos biome</b>	A very large group of related species (9700) only endemic to the Southern Cape region of South Africa

**G**

<b>Gabion</b>	A wire mesh framework filled with rocks; used to restore erosion gullies
<b>Game auction</b>	Selling game at a traditional auction with the animals on display
<b>Game cubes</b>	A type of supplemental feed
<b>Ganglia</b>	Primitive brain or neural network
<b>Gas energy</b>	The energy lost from the animal in the form of heat
<b>Gasterophilidae</b>	A fly family representing those species which lays eggs in the coat/hide of animals
<b>Gastro-intestinal tract</b>	A combination of interconnecting organs and structures from the oesophagus to the anus. The path of food from ingestion to excretion
<b>Geeldikkop (sunlight sickness)</b>	A disease affecting animals ingesting plants with chemicals which cause photo-sensitivity in animals.
<b>Gene</b>	The part of a chromosome which determines the individual's characteristics
<b>Gene Pool</b>	The total of the genes in a population of organisms
<b>Genotype</b>	The sum total of the hereditary factors of an organism
<b>Geology</b>	The study of the history and life of the earth as it is recorded in rocks
<b>Geomorphology</b>	The study of relief features of the earth's surface
<b>Geophagia</b>	The eating of soil by herbivorous animals
<b>Geotropism</b>	The growth of a plant in response to gravity
<b>Gestation</b>	Pregnancy; the period from conception to birth for viviparous animals
<b>Gifblaarsiekte (poison leaf sickness)</b>	A disease affecting the central nervous system of carnivores and the heart of ruminants
<b>Glycosides</b>	Substances found in the leaves of plants, which may be toxic to animals in large quantities
<b>Gnathosoma</b>	The mouthparts of a tick
<b>Gonads</b>	Reproductive organs of animal species
<b>Gousiekte (quick sickness)</b>	A disease affecting ruminants which ingest dwarf medlar plants. Animals die rapidly from chronic heart seizure
<b>Graminivorous</b>	Subsisting on grass
<b>Granivores</b>	Organisms that feed on seed
<b>Grass sward</b>	A clump of grass
<b>Grazers</b>	Animals which consume mostly grass
<b>Grazing Capacity</b>	The maximum number of productive animals that can be maintained on an area without causing deterioration of the veld condition
<b>Greenhouse Effect</b>	The effect of increased heating caused by the absorption of radiation (heat) by carbon dioxide in our atmosphere
<b>Gregarious</b>	Living together in colonies or groups
<b>Gregarious species</b>	A species that prefer to congregate in groups
<b>Growth rate</b>	The increase in the size of a population from one year to the next expressed as a % of the population
<b>Gustatorial</b>	Pertaining to taste
<b>Gymnosperm</b>	Unprotected seed/division of seed bearing plants



**H**

<b>Habitat</b>	The kind of place in relation to vegetation and climate in which a given species of animal lives. Generally, a localised area
<b>Haemotoxic</b>	Type of venom that causes blood to stop clotting, associated with internal haemorrhaging
<b>Harem</b>	A group of females (ungulates) herded and protected by a dominant male animal
<b>Harvesting rate</b>	The number of animals harvested from a game population expressed as a % of the entire population
<b>Head burn</b>	A fire that is lit in such a manner as to burn with the wind. The fires move very rapidly and are generally not very destructive. Also known as a cool burn
<b>Heartwater</b>	A disease transmitted by ticks causing nervous symptoms and death in especially springbok and eland
<b>Helminthes</b>	Parasitic worms infecting the internal organs of animals
<b>Hemicellulose</b>	A type of plant tissue, difficult to digest
<b>Hemimetabolous</b>	Incomplete metamorphosis (in insects)
<b>Hemipenes</b>	A paired copulatory organ (males)
<b>Herbicides</b>	Chemicals used to control the growth of shrubs and trees
<b>Herbivore</b>	An animal that eats plants
<b>Heredity</b>	The study of how characteristics are passed from parent to offspring
<b>Hermaphrodite</b>	An animal that contains both male and female reproductive organs
<b>Heterogeneity</b>	The variation in species, soils, etc. Evident in an area
<b>Heterotrophic</b>	Unable to photosynthesise, eats other organisms
<b>Heteroxenic</b>	A parasite having two hosts
<b>Hibernate</b>	An animal that sleeps through the winter
<b>Highveld</b>	The region in South Africa, 2000m (6600 ft) above sea level containing the Gauteng Province (Johannesburg, Pretoria)
<b>Hindgut fermenters</b>	Herbivores that do not ruminate. Non-ruminants. Fermentation and digestion occurs in the animals single compartmentalised stomach and intestines
<b>Hippoboscidae</b>	An ectoparasitic fly family which display the same ecology as lice
<b>Holism</b>	A point of view that links everything together
<b>Holometabolous</b>	Complete metamorphosis (in insects)
<b>Home Range</b>	The area over which an animal normally travels in pursuit of its routine activities
<b>Homeothermy</b>	The regulation of constant body temperature by physiological means
<b>Homogenous Vegetation Units</b>	An artificial segment of vegetation that is comprised of a single form of dominant vegetation. Hvu are used for habitat analysis
<b>Hormone</b>	An internal chemical message within an organism
<b>Host</b>	A plant or animal that harbours a parasite
<b>Host community</b>	A local community (often rural) that is close to an ecotourism destination
<b>Humification</b>	The process by which humus is formed
<b>Humus</b>	Compost, decaying vegetable matter
<b>Hybrid</b>	The resultant offspring of a successful mating between two different species. E.g. Zebra and donkey hybridize to produce a zonkey.
<b>Hydrology</b>	The study of properties, distribution and circulation of water
<b>Hydrolysable tannins</b>	Tannins found in the vacuoles of leaves which inhibit digestive enzymes of herbivores
<b>Hydromorphism</b>	The formation of soils because of excessive water conditions

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<b>Hydrophilic</b>	An organism that is attracted to water / has an affinity to water
<b>Hydrophobic</b>	An organism that is repelled by water
<b>Hydrophyte</b>	A plant suited to wet conditions
<b>Hypersensitivity</b>	An over-sensitivity to certain stimuli and / or chemicals. Example, bee-stings
<b>Hypodermid</b>	Type of fly larvae which burrow under the skin

<b>Ichthyologist</b>	A scientist that studies fish
<b>Igneous</b>	Rock of volcanic origin e.g., dolomite
<b>Illuviation</b>	The movement of soil material into a horizon
<b>Immobilized</b>	A drugged animal which is unaware of its surroundings; the animal loses consciousness and can be handled easily
<b>Immobilising drugs</b>	A drug whereby an animal is rendered immobile and unconscious. Used in game capture
<b>Immunology</b>	The study of the immune system and the resistance it presents to infection
<b>Imprinting</b>	When an animal has become fixated onto another organism, with the assumption that the organism is its parent
<b>Inbreeding</b>	Breeding, in animals that are closely related genetically. A frequent cause of abnormalities
<b>Increaser I</b>	A grass species that is dominant in poor veld and which increases when a veld is under grazed.
<b>Increaser IIa</b>	A grass species which increases under conditions of light overgrazing.
<b>Increaser IIb</b>	A grass species that increases under conditions of medium overgrazing
<b>Increaser IIc</b>	A grass species that increases under conditions of heavy overgrazing
<b>Incubation</b>	The act of keeping eggs warm until they hatch
<b>Indicator Species</b>	Organisms that live or grow only in specific conditions and environments. They indicate the health of their environment
<b>Inflorescence</b>	The flowering parts of grass plants
<b>Infrasound</b>	Ultrasonic made by elephants for communication of long distances
<b>Inguinal</b>	A reference to the groin region, often associated with a gland
<b>Inorganic</b>	Of mineral origin, not alive
<b>Insecticide</b>	An artificial chemical for killing insects
<b>Insectivorous</b>	Subsisting entirely or mainly on insects
<b>Insolation</b>	Incoming solar radiation / an amount of energy received from the sun
<b>Interspecific</b>	Between different individuals/ species/ groups / communities / etc
<b>Intraspecific</b>	Between the same individuals /species / groups / communities / etc
<b>Invaders</b>	Alien grass species
<b>Invasive Plants</b>	Plants that are usually not endemic to an area, and can outcompete local resident species
<b>Invertebrates</b>	An animal without a backbone
<b>Ionophore</b>	An antibiotic used to improve growth in livestock and prevent coccidiosis
<b>Ischium</b>	A skeletal structure on the hindquarters of ungulates
<b>Isoptera</b>	The order which includes termites
<b>Isotope</b>	A variation of a chemical element which differs slightly in its atomic structure from other atoms of the same element
<b>Ixodid</b>	A group of tick species representing those with hard or shield-like bodies

**J**

<b>Jaundice</b>	An abnormal condition characterised by the deposition of bile pigment in the skin.
<b>Juvenile</b>	Not yet adult

**K**

<b>K</b>	The symbol for Ecological capacity
<b>Keratin</b>	A hard-natural substance that is the main component in hair, nails, hooves and horns
<b>Keratinisation</b>	Hardening, usually of the skin
<b>Keystone species</b>	A species that is fundamental in the functioning in a specific ecosystem. Should that species be removed or die that whole ecosystem would be highly disrupted
<b>Kleptoparasite</b>	Small spiders that live on the webs of larger species and steal (portions of) small prey that gets trapped in the web. E.g. Mercury spiders.

**L**

<b>Labdiognathous</b>	Web-spinning spider species
<b>Labial</b>	Pertaining to the lips
<b>Lactation</b>	To produce milk for purposes of suckling young
<b>Lactrodectism</b>	The advanced effects of a certain type of spider bite
<b>Large Stock Unit</b>	An animal that weighs 450 kg, whose mass increases by 500g daily on a vegetation diet with a digestibility of 55%
<b>Large Stock Unit (LSU)</b>	A bovine animal of 450 kg (992 lbs), increasing in mass by 500 g (1.1 lbs) daily on grazing with a digestibility of 55 %.
<b>Larva</b>	An insect from the time it leaves the egg up until it changes into a pupa
<b>Latex</b>	The milky liquid found in the leaves and stems of certain plants
<b>Leaching</b>	The moving of nutrients and minerals through the soil profile by the action of water
<b>Lentic</b>	Pertaining to standing water such as lakes and ponds
<b>Lichen</b>	A plant made up of algae and a fungus growing in a symbiotic relationship
<b>Lick</b>	See Mineral Lick or Supplementary Feeding
<b>Light year</b>	The distance one would travel if you could move at the speed of light for 365 days in a straight line
<b>Lignification</b>	Grasses becoming older and producing lignin (plant cell type) making them harder and less palatable
<b>Limiting Factor</b>	A condition defining whether an organism will survive in each place or not, e.g., availability of water
<b>Lithological Discontinuity</b>	The process which gives rise to a soil profile consisting of soils originating from different parent materials
<b>Lithosphere</b>	A portion of the earth consisting of soil and rock
<b>Live sales</b>	The selling of live game for establishing new populations or introducing genetic material into existing populations.
<b>Liverworts</b>	Plants without vascular conducting tissue (no xylem or phloem tubules). They are in the same group as mosses and look similar.
<b>Longevity</b>	Life-span
<b>Lotic</b>	Pertaining to flowing water
<b>Lowveld</b>	The North-Eastern region of South Africa, encompassing the Mpumalanga and Northern Provinces (Kruger National Park and the land to the west of it extending for 400 Km (250 miles).
<b>Loxodonta</b>	The Generic name for elephants. From the Latin 'loxos' meaning a lozenge and 'donta' meaning tooth. The name refers to the lozenge-shaped ridges on the molar (chewing) teeth of elephants.
<b>LSU</b>	Large stock unit / livestock unit
<b>Lucerne</b>	An artificially-grown form of hay
<b>Lumbar vertebrae</b>	Pertaining to the lower spine

**M**

<b>Macro-climate</b>	The physical climatic conditions that affect a large area i.e. The macro-climate of the Lowveld
<b>Macro-elements</b>	Elements that animals require in moderate quantity
<b>Maggot</b>	The leg-less larva of a fly
<b>Maize</b>	Corn
<b>Malaria</b>	A disease transmitted by mosquitoes. Symptoms include a high fever, aching joints, headache, nausea and shivering. Three million people die from this disease annually in Africa
<b>Mammal</b>	An animal that gives birth to live young, and suckles its young
<b>Management (habitat)</b>	The efforts of humans to oversee nature wisely to conserve it
<b>Mandibles</b>	Set of biting mouthparts of insects
<b>Marsupial</b>	A pouched mammal endemic to Australia
<b>Matriarch</b>	A female that is the leader of her herd, pride, flock
<b>Mealie</b>	Maize (corn)
<b>Melanism</b>	A state in which too much melanin pigment is formed, resulting in a black coloured population of animals e.g. Gabar goshawk
<b>Mesophyte</b>	A plant suited to temperate living conditions which are neither too wet nor too dry.
<b>Metabolisable energy</b>	Energy available to the animal after the energy lost in the urine and gas products is subtracted.
<b>Metabolism</b>	Chemical reactions that take place inside living organisms
<b>Metabolites</b>	Chemicals
<b>Metamorphosis</b>	A series of morphological changes that insects undergo that gradually changes them from a juvenile to adult form and allows them to become reproductively active
<b>Micro elements</b>	Elements that animals require, but in minute quantities only
<b>Micro-climate</b>	The physical environmental condition confined to a very small area or location i.e. The micro-climate of a woodland dormouse hole, wild dog den or termite mound
<b>Micro-flora</b>	Microorganisms living in the digestive tract
<b>Microbes</b>	Microscopic organisms
<b>Midden</b>	A regularly used site for depositing of dung
<b>Migration</b>	The movement of animals over long distances, associated with birds and certain ungulates
<b>Mimicry</b>	The resemblance of one organism to another. Taking on another organism's colour, vocalisation, action or attribute.
<b>Mineral Lick</b>	An artificially produced nutritional material used to supplement natural grazing of wildlife. Licks may be nutritive, salt or medicinal
<b>Mites</b>	Tiny ecto- or endo-parasites which may be herbivorous
<b>Mixed Feeder</b>	Animals that both browse (leaves) and graze (grass)
<b>Mixed veld</b>	A transitional zone between sweet and sour veld, suitable for grazing 6 - 10 months of the year depending on location
<b>Mollusc</b>	Bilaterally symmetrical unsegmented invertebrates consisting of a head, muscular foot and visceral hump e.g. Snails
<b>Monoecious</b>	A plant possessing both male and female organs in the same flower
<b>Monogamy</b>	Mating of an animal with only one member of the opposite sex at a time
<b>Monotreme</b>	An egg-laying mammal. Only two species exist, both endemic to Australia, the echidna and duck-billed platypus
<b>Morbidity</b>	See Morbidity rate

<b>Morbidity Rate</b>	Refers to the percentage of animals infected by a disease but not dying from the disease
<b>Moribund</b>	A reference to grass that has not been utilised by either fire or grazing. It is nutrient-poor.
<b>Morphology</b>	The physical external features of an organism
<b>Mortality Rate</b>	The percentage of animals which die because of a disease or activity
<b>Moult</b>	The shedding of skin, hair or feathers
<b>Muscular dystrophy</b>	A muscular disease causing the animal incoordination, restricted movement, leading to muscle damage
<b>Musth</b>	The period when male elephants are seeking mates. During this time, they are often aggressive. For a fuller description, please do the wildlifecampus Free Lesson on elephants
<b>Mutualism</b>	A non-obligatory relationship in which both organisms benefit
<b>Myiasis</b>	The presence of fly maggots on a body or carcass
<b>Myremecophagic</b>	Subsists on a diet of ants (Hymenoptera) or termites (Isoptera)
<b>Myriapoda</b>	A defunct zoological term that unites all Arthropoda that have elongated bodies, multiple legs and a distinct head e.g. Millipedes and centipedes

**N**

<b>Nagana</b>	"Sleeping sickness" a protozoal disease transmitted by tsetse flies causing fever and anaemia in cattle, wildlife tend to be carriers.
<b>Native species</b>	A species that has always been found (endemic) to a specific area
<b>Natural licks</b>	A naturally formed mineral-rich reef in soil, usually with a high salt content
<b>Natural Selection</b>	Survival of the offspring of the fittest
<b>Necropsy</b>	An autopsy
<b>Necrosis</b>	The dying off of tissue, associated with injury or envenomation
<b>Neosporosis</b>	A protozoal disease like toxoplasmosis, but differs in that dogs, not cats form part of its life cycle
<b>Nestling</b>	A newly hatched chick (bird) that is unable to leave the nest yet
<b>Nett energy</b>	Amount of energy available to the animal for growth, lactation, cellular metabolism etc.
<b>Neurotoxic</b>	A type of venom that acts on the central nervous system associated with cardio-vascular distress and collapse
<b>Niche (ecological)</b>	A very specific set of conditions within a habitat, specifically suited to the requirements of a single species
<b>Nocturnal</b>	Organisms that are most active at night
<b>Nomadic</b>	An animal that moves from one location to the next frequently
<b>Non-consumptive use of game</b>	Ecotourism, photographic safaris
<b>NPN</b>	Non-proteinaceous nitrogen.
<b>Nutrient metabolism heat</b>	The heat produced through the metabolic process, causing a loss of energy



**O**

<b>Ocelli</b>	Simple eyes found on many invertebrates. Their function is to detect light and movement, but not shape or form. They are usually found in clusters of 4 – 6
<b>Oestridae</b>	Family of flies and larvae which lay eggs on the eyes or in the nasal passages of animals
<b>Oestrus</b>	The period when a female will mate for fertilisation
<b>Olfactory</b>	Pertaining to the sense of smell
<b>Oligarchy</b>	A social system dominated by several large males e.g. A baboon troop
<b>Omasum</b>	The third compartment of a ruminant stomach. It is a muscular segment that mixes food mechanically
<b>Omnivore</b>	An organism showing tendencies to eat both plant and animal matter
<b>Oocysts</b>	The infective spore stage in the life cycle of protozoa
<b>Ootheca</b>	A packet of invertebrate eggs. Usually regarding insects
<b>Organic</b>	Once living or alive
<b>Orthognathous</b>	Spiders that actively move around hunting. They can but do not spin webs for prey capture
<b>Osmosis</b>	The movement of a liquid across a selectively permeable membrane
<b>Osteophagia</b>	The practice of herbivores consuming bones
<b>Osteophagy</b>	The practice of eating bones, where the behaviour is not common. E.g. Antelope eating bones
<b>Oviduct</b>	A portion of the female reproductive system
<b>Oviparous</b>	Egg-laying
<b>Ovipositor</b>	An anterior (rear) appendage of female Arthropoda that is used to lay eggs into exact locations. It may be modified into a stinging apparatus e.g. Wasps
<b>Ovo-viviparous</b>	Live-bearing animals that retain eggs for incubation internally
<b>Oxidation</b>	When oxygen combines with a metallic substance in a chemical reaction

**P**

<b>Palaeontology</b>	The study of fossils
<b>Palatability</b>	How tasty an animal finds a plant or another animal
<b>Paleo-climate</b>	Ancestral climatic conditions that were prevalent thousands or millions of years ago
<b>Palps (labial)</b>	Sensory organs of the mouthparts of insects
<b>Panleukopenia</b>	A viral disease affecting the immune system of felids.
<b>Papillae</b>	Absorption structures in the stomach, resembling small bumps
<b>Parakeratosis</b>	An abnormal condition affecting the epidermal cells of tissues
<b>Parasite</b>	An organism that derives its nutritional needs from another living organism at the expense of that organism (called a host)
<b>Parasitism</b>	A symbiotic relationship in which the parasite benefits and the host is negatively affected
<b>Parent Material</b>	A term used to describe the original underlying rock from which soil was formed
<b>Paresis</b>	The weakening of the muscles, leading to partial paralysis
<b>Parotid</b>	Pertaining to the throat region
<b>Parturition</b>	The act of giving birth
<b>Parvovirus</b>	Viral disease-causing suppression of the immune system in canids
<b>Passerine</b>	Perching birds
<b>Pathogen</b>	Harmful microorganism responsible for disease, cholera, botulism, syphilis and many others
<b>Pathogenicity</b>	The ability of the vector to induce any degree of disease in the host
<b>Pathogenesis</b>	The process of the development of disease in a host
<b>Pecora</b>	A systematic division of the Artiodactyla representing those animals with well-developed, four-chambered ruminant stomachs. Most have paired horns on the head. E.g. Giraffe and all the bovinds.
<b>Pecorans</b>	Ruminant mammals, usually with paired horns
<b>Pedogenesis</b>	The formation of soil
<b>Pedoturbation</b>	Mixing of the soil layers by earthworms for example
<b>Pelage</b>	The "pelt" of fur-bearing animals
<b>Perennial</b>	Plants that live for several years
<b>Perennial (plants)</b>	A plant that lives more than two years
<b>Perennial (water)</b>	A body of water (river, stream or lake) that remains throughout the year or over many years.
<b>Perihelion</b>	The closest point of a planet's orbit from the sun
<b>Perissodactyla</b>	Odd-toed ungulates. Members of this mammalian order are characterised by having either a single toe or three toes together. E.g. Zebra and rhino.
<b>Petechiation</b>	The appearance of flat, purplish-red spots on internal tissue; normally caused by an internal haemorrhage
<b>Petiole</b>	The stalk that attaches a leaf to a stem
<b>Phenology</b>	The study of a plant's life cycle, including flowering, abscission, fruit production etc.
<b>Pheromones</b>	Chemical substances secreted by animals that cause specific reproductive, developmental or behavioural responses in neighbouring members of the same species

<b>Photo-sensitivity</b>	Over-sensitivity to sunlight
<b>Photoperiodism</b>	The response of plants to changing day and night length
<b>Photosynthesis</b>	The process whereby plants produce carbohydrates from sunlight
<b>Phototropism</b>	The growth of a plant in response to a light source
<b>Physiognomical structure</b>	The general form, shape and appearance of the vegetation
<b>Physiognomy</b>	The structure, in terms of height and density, of the vegetation comprising a plant community e.g. Short closed grassland
<b>Physiographic</b>	A combination of factors that are used to describe an ecosystem, including topography, aspects, latitude and altitude
<b>Physiological</b>	Pertaining to body chemistry
<b>Phytomass</b>	The mass of grass material in a specific area
<b>Phytomers</b>	Describing the general morphology of grass, consisting of an internode, node, leaf, bud and adventitious root
<b>Pica</b>	Depraved appetite. Animals consume unusual substances to satisfy a mineral deficiency, especially phosphorus.
<b>Picarism</b>	The ability that animals have to sense they are ill or have a mineral deficiency. The seeking and consumption of unusual food by animals which are sick or suffering from a mineral deficiency
<b>Pinnae</b>	External ear lobes
<b>Pioneer stage</b>	Vegetation that is the first to colonise (begin growing) in an area.
<b>Piscivore</b>	A diet of fish
<b>Plankton</b>	Small floating or weakly swimming plants and animals in fresh and marine ecosystems
<b>Plantigrade</b>	An animal that walks or stands on the whole surface of its feet e.g. Humans, other primates and bears
<b>Plastron</b>	The lower portion of a Chelonia shell
<b>Plumage</b>	Feathers
<b>Pod</b>	The hard outer shell that protects fruit/seeds
<b>Pollination</b>	The transfer of genetic material (pollen) from the stamen (male part) of one flower to the stigma (female part) of another flower of the same species
<b>Polyandry</b>	The mating of one female with more than one male
<b>Polygamy</b>	A male that mates with more than one female
<b>Polymorphism</b>	Different body forms in the same species e.g. Soldier and worker termites
<b>Population</b>	A group of conspecifics that reside in the same habitat in the same area or region
<b>Pre-orbital</b>	Pertaining to the region around the eye
<b>Precipitation</b>	Any form of rain, sleet, snow, hail dew, fog or mist
<b>Precocial</b>	Young born in an advanced state, they can move about, covered in fur or feathers, and are not blind and helpless

<b>Predilection site</b>	Preferred attachment places for ticks
<b>Prehensile</b>	Able to grasp and hold onto things with a tail/tongue
<b>Preputial</b>	Pertaining to the genital region of males, specifically the penile area
<b>Primate</b>	Mammals having opposable thumbs for grasping
<b>Proto-alkaloids</b>	An alkaloid without the heterocyclic nitrogen atom.
<b>Protozoa</b>	A unicellular animal
<b>Prussic Acid Poisoning</b>	Poisoning in animals after consuming wilted and damaged plants containing harmful glycosides
<b>Pseudo-alkaloids</b>	Type of alkaloid differing from others in terms of the origin of the carbon framework.
<b>Psychological</b>	Pertaining to the mind, usually regarding behaviour
<b>Pupa</b>	Insect in the pre-active, pre-adult form (cocoon)
<b>Putrefaction</b>	Decomposition of organic substances and the release of foul-smelling gases

**Q**

<b>Quarantine</b>	Restricting the movement of animals to prevent the spread of disease
<b>Quinine</b>	A bitter-tasting chemical used in the treatment of Malaria, or as an anti-malarial
<b>Quintal</b>	A unit of measure equal to 100 Kilograms (220.5 lbs)

**R**

<b>Rabies</b>	A viral disease, specifically of canids - although all mammals are susceptible. Mortality is extremely high.
<b>Radula</b>	A specialised feeding apparatus of molluscs, a conveyer belt-like tongue, studded with teeth that is used to scrape up vegetation
<b>Raptor</b>	A bird of prey
<b>Ratites</b>	Flightless birds
<b>Regurgitation</b>	Vomiting/Throw back up
<b>Reservoir Host</b>	An animal that harbours a parasite without suffering any adverse effects
<b>Resilience</b>	The ability of an ecosystem to recover from a disturbance
<b>Reticulum</b>	The second compartment of a ruminants' stomach. It is non-glandular; it directs re-chewed food to the omasum
<b>Rhinotracheitis</b>	A viral disease affecting felines and causing flu-like symptoms
<b>Rhizome</b>	The modified stem of a plant which grows underground
<b>Rickets</b>	Vitamin D deficiency resulting in defective bone growth in young animals
<b>Rinderpest</b>	A viral disease affecting all cloven-hooved animals.
<b>Ring barking</b>	Removing the bark from around the base of a tree. This usually causes the tree to die within 1 - 3 years
<b>Riparian</b>	Vegetation on either side of a riverbank
<b>Riverine</b>	Along a river's edge
<b>Rotational grazing</b>	A habitat management method whereby grazers are manipulated into moving from one area to another to graze
<b>Roughage feeder</b>	See bulk grazer
<b>Rowland Ward System</b>	A directory of big game records. Horn and tusk lengths and weights. The data is collected from hunted animals.
<b>Rumen</b>	The first compartment of a ruminant's stomach. It is non-glandular and holds symbiotic micro-organisms that facilitate the digestion of cellulose
<b>Ruminant</b>	An animal that chews the cud
<b>Rupicolous</b>	Free-living, able to move about at will
<b>Rut</b>	The period of sexual activity in animals specifically herbivores

**S**

<b>Salmonellosis</b>	A disease caused by bacteria of the <i>Salmonella</i> genus causing severe diarrhoea
<b>Saprophyte</b>	A plant that grows on dead organic matter
<b>Sarcocystosis</b>	Heteroxenic protozoal disease-causing cysts in herbivores and mild gastro-intestinal upsets in carnivores
<b>Savannah</b>	Vegetation consisting of grass and scattered trees. Primarily a grassland biome
<b>Scat</b>	The faeces or droppings of carnivores
<b>Scavenger</b>	An animal that eats dead and decaying animals
<b>Scorching effect</b>	Woody vegetation is burnt during its active growing phase. This reduces its density.
<b>Scutes</b>	A layer of keratin scales. Found in the on the shells on Chelonia and on pangolin
<b>Sedated</b>	An animal which has been exposed to a high or excessive dose of tranquillizers
<b>Sedentary</b>	Inactive species that exhibits very little movement e.g. Mussels
<b>Sedge</b>	A grass-like plant growing in marshes
<b>Sedimentary</b>	Rock formed from material deposited in layers
<b>Seep-line</b>	The line on a slope where soil and clay meet and where water can come out on to the surface
<b>Segment</b>	A distinct plate or part of an insect's skin or armour
<b>Seizures</b>	Convulsions
<b>Selective Feeder</b>	An animal that is selective about species and length of grass eaten by preference
<b>Selective feeder/grazer</b>	An animal that feeds by carefully selecting the species being eaten
<b>Senescence</b>	The process of ageing leading ultimately to death
<b>Serology</b>	The properties and reactions of antibodies
<b>Serum</b>	Artificially produced and administered chemical compound
<b>Sessile</b>	An organism that spends its entire lifecycle fixed to one site E.g. Plants
<b>Sinistral</b>	Left-handed or pertaining to the left
<b>Sirenians</b>	The Order of mammals containing the manatees, sea lions and dugong
<b>Slaframine</b>	A toxic alkaloid secreted by a specific fungus species
<b>Slangkop</b>	Type of plant containing cardiac glycosides; harmful to animals especially in spring
<b>Slashing</b>	A habitat management technique for cutting grass
<b>Slough</b>	To shed (skin) associated with snakes
<b>Smectites</b>	Clay materials which have swelling properties
<b>Snotsiekte</b>	Bovine malignant catarrhal fever
<b>Solitary</b>	An animal that generally chooses to live alone
<b>Sounder</b>	The collective noun for warthog
<b>Sour Grass</b>	Grass that is not readily digestible and is usually only eaten by grazers when it is young and tender
<b>Sour veld</b>	Grazing that loses its palatability and nutritional value at maturity
<b>South African Sub Region</b>	Southern Africa including Angola, Namibia, Botswana, Zimbabwe, Mozambique, Swaziland, Lesotho and South Africa
<b>Speciation</b>	The evolution of a species
<b>Species diversity</b>	The relative abundance of species in a specific area/region/habitat/biome or community in relation to another

<b>Species richness</b>	The physical number of species in a specific area/region/habitat/biome or community
<b>Spermatophore</b>	Genetic material produced by the male
<b>Spiracles</b>	Holes on the sides of an arthropod through which gas exchange occurs
<b>Stabilimenta</b>	A zig-zag thickened conspicuous web stand in the centre of a web to warn animals or birds of the web's presence
<b>Stability</b>	When pertaining to an ecosystem it is how the system can resist change
<b>Stamen</b>	The male reproductive structure of a flower
<b>Stigma</b>	A part of the female reproductive structure of a flower
<b>Stolon</b>	A creeping stem of a plant which runs along or just beneath the surface of the ground
<b>Stratification</b>	Layering within an ecosystem
<b>Stridulation</b>	The act of an arthropod scraping an appendage along its exoskeleton to produce sound. Used either as a warning of its presence or to attract a conspecific
<b>Stylets</b>	Modified mouthparts of parasitic Arthropoda
<b>Stywesiekte (stiff sickness)</b>	Plant poisoning disease with symptoms like inflammation of the hooves and liver necrosis.
<b>Sub-species</b>	Geographical unit of a species population distinguishable by certain morphological and physiological characteristics
<b>Substratum</b>	The surface off which an organism lives, eats or otherwise interacts. Dependant on the context.
<b>Succession</b>	The changes in species diversity through which plant communities colonise an area May advance or retrogress
<b>Supplementary Feeding</b>	The artificial provision of nutrients lacking in natural veld conditions
<b>Sustainable utilisation</b>	The use of a natural resource without depleting its reserves
<b>Sustainable yield</b>	The amount of a natural resource that can be used or taken without depleting its reserves
<b>Swamp</b>	A wooded wetland where the water is either near to or above the ground
<b>Sweet Grass</b>	Grass that is palatable and chosen by grazers as food when it is available
<b>Sweet veld</b>	A low lying, frost-free area where grazing (grass) maintains its palatability and nutritional value throughout their life cycle.
<b>Sylvatic cycle</b>	The natural cycle may pertain to disease in its reservoir form
<b>Symbionts</b>	Organisms in a symbiotic relationship with another species
<b>Symbiosis</b>	A relationship between two different types of living organisms where both benefit and the association are compulsory
<b>Synecology</b>	The study of communities of organisms interacting with each other or with their environment.

**T**

<b>Tactile</b>	Pertaining to touch.
<b>Tampan</b>	A type of tick; lives in warthog burrows.
<b>Tannin</b>	A chemical produced in the leaves of plants that make the leaves unpalatable to animals.
<b>Tapetum</b>	A reflective layer inside the eyes of animals that maximise the amount of light entering the eye.
<b>Taxon</b>	A classification unit e.g. Kingdom, order, family, species.
<b>Taxonomy</b>	The classification of organisms into units (related groups).
<b>Tef</b>	See lucerne.
<b>Telson</b>	A scorpion's sting.
<b>Temporal gland</b>	A gland found on the head of animals, generally situated between the eyes and ears. Elephants produce a discharge from this gland during Musth.
<b>Termitarium</b>	A termite colony.
<b>Terrestrial</b>	Related to the land.
<b>Territory</b>	The area which an animal will defend against members of its own species.
<b>Testosterone</b>	A male hormone that accounts for the development of male characteristics and reproductive drive.
<b>Thallophyte</b>	Thallophytes are plants that do not have vascular conducting tissue - they have no phloem or xylem vessels. Lichen, mosses and liverworts are examples of thallophytic plants.
<b>Thallophytes</b>	Plants that do not possess true roots, stems or leaves e.g. Bacteria, algae and fungi.
<b>Theileriosis (Corridor Disease)</b>	Protozoal disease transmitted by two tick species causing fever and subsequent death.
<b>Thermals</b>	Rising columns of warm air.
<b>Thermocline</b>	The border between two different temperature zones, usually pertaining to water.
<b>Thermoregulation</b>	The regulation of internal body temperature.
<b>Thigmotropism</b>	Describes a plant's response to contact.
<b>Thorax</b>	Breast-plate or part of the insect body between the head and abdomen.
<b>Thyroxine</b>	A hormone produced by the thyroid gland which regulates metabolism in the body.
<b>Topography</b>	The form of a land surface e.g. Valley or crest.
<b>Toposequence</b>	A repetitive pattern of soils always associated with certain terrain morphological units.
<b>Torpor</b>	Hibernation daily.
<b>Toxicosis</b>	Any disease condition resulting from the ingestion of poison or toxic substance.
<b>Toxins (plant)</b>	Natural or secondary products produced by a plant which may be harmful to other organisms when ingested.
<b>Toxoplasmosis</b>	Protozoal disease-causing cysts in infected animals. Also, causes abortions and congenital disease in humans.
<b>Trachea</b>	Windpipe connecting the lungs with the mouth.
<b>Tracker</b>	The field guides assistant/partner principally responsible for tracking and finding game.
<b>Tranquilizing drugs</b>	A drug that renders an animal unable to move. The animal is however conscious, awake and aware of its surroundings and experience. Used in game capture.



<b>Tranquillized</b>	A drugged animal which remains aware of its surroundings and cannot be handled easily. Tranquillizers remove fear and anxiety in animals.
<b>Transpiration</b>	The loss of water vapour by plants.
<b>Trophic</b>	The nutritional levels in the food chain.
<b>Trunk</b>	Elongated upper lip and nose, muscularised and highly dextrous.
<b>Tusks</b>	Elongated upper incisor teeth, mostly used in feeding.
<b>Tympanum</b>	A vibrating membrane in insects which detects sound.

**U**

<b>Ungulate</b>	A hoofed animal.
<b>Unguligrade</b>	An animal (ungulate) that walks on the tips of its modified toes (hooves).
<b>Urea</b>	A non-protein nitrogen source often included in licks as a protein supplement.
<b>Urine energy</b>	The energy lost from the animal through urination in the form of heat and nutrients.

**V**

<b>Vector</b>	An organism responsible for the spread of disease.
<b>Venison</b>	Game meat.
<b>Vermeersiekte (expand sickness)</b>	Disease-Causing vomiting due to the paralysis of the oesophagus.
<b>Vestigial</b>	Without any discernible function.
<b>Vibrassae</b>	Whiskers, highly sensitive tactile outgrowths of stiffened hair often from around the animal's muzzle.
<b>Virulence</b>	The degree to which severe disease is induced in a host.
<b>Viviparous</b>	An animal whose young are born alive and not from an egg.

**W**

<b>Water dependent</b>	Animals that require water to drink daily.
<b>Water Table</b>	The level at which water is found underground.
<b>Waterlogged</b>	The saturation of the soil with water whereby the water table is at ground level.
<b>Wattle</b>	Skin flaps usually on the sides of the face of certain birds, e.g. Saddle-billed stork.
<b>Weaned</b>	When a juvenile mammal stops suckling.
<b>Weathering</b>	The process whereby rock is eroded by either chemical or physical means.
<b>Wetland</b>	An area that is seasonally or permanently flooded.

**X**

<b>Xerophthalmia</b>	Conjunctivitis caused by vitamin A deficiency in which the eyes remain dry.
<b>Xerophyte</b>	A plant that grows in dry conditions.

**Y**

<b>Yard</b>	A unit of measure (non-metric) equivalent to just short of one meter.
<b>Yearling</b>	An animal (mammal) that is between one and two years old.
<b>Yeast</b>	A type of fungi (Ascomycota) used in fermentation and baking. See Lower Plants of the Field Guiding - Botany Module.

**Z**

<b>Zero grazing</b>	When animals are kept in captivity and exclusively fed in enclosures. They do not experience natural grazing.
<b>Zonation</b>	Dividing sections of an ecosystem into zones based on function / appearance / etc.
<b>Zoogeography</b>	A division of biology that deals with the geographical distribution of animals.
<b>Zoonosis</b>	An infection or infestation affecting both man and animal.
<b>Zygote</b>	The single-celled result from the fusion of egg and sperm.