Glossary

GLOSSARY

This glossary contains words or phrases used throughout one or both volumes of the *Natural History of Nova Scotia.* Words or phrases that appear only within a specific context in the document are generally not included in this glossary, because their definitions can usually be found under the relevant Topics or Habitats.

ablation till
A surface deposit of loose, permeable, somewhat stratified sandy and stony till overlying denser till.

Acadian Forest
A transitional zone within the Southeastern Mixed Forest defined by Rowe in 1972 as the area between the coniferous Boreal Region to the north and the Deciduous Region to the south. This forest is characteristic of the Maritime Provinces and, being transitional in nature, includes a variety of forest associations.

Acadian Orogeny
A time of mountain building during the Devonian period.

accretion or aggradation
Natural accretion is the buildup of land on a beach by natural deposition of waterborne or airborne material. The process may be managed or accelerated by human action.

acidification
The lowering of pH in soils or water. Commonly associated with changes caused by external processes such as acid precipitation and acidic runoff.

acid precipitation
Rain water or snow containing sulphur and nitrogen compounds and other pollutants associated with industrialization.

acritarchs
An apparently unicellular microfossil of unknown biological affinity ranging in age from Precambrian to Holocene.

aeolian
See *eolian.*

aerobic
Environmental condition where oxygen is present; usually applied to the condition of water or soil.

Alleghanian
Referring to species associated with deciduous forests to the south.

allies
A non-specific term indicating groups of organisms closely related by likeness, etc.

alluvial deposits (alluvium)
Material such as clay, silt, sand, and gravel deposited by modern rivers and streams.

altered rock
A rock whose nature has been changed by geological processes.

amphibolite
A metamorphic rock composed mainly of silica-based rock-forming minerals.

amphipods
A group of crustaceans that includes freshwater shrimps.

amygdaloidal
Containing gas bubbles trapped in lava that were subsequently filled with (often semiprecious) minerals, for example, in basalt.

anadromous
Used to describe fish that spawn in fresh water after spending most of their lives in the sea.

anaerobic
Environmental condition where oxygen is absent or in limited supply; usually applied to the condition of water or soil.

andalusite
A brown, yellow, green, red, or grey mineral (an aluminum silicate) associated with regionally metamorphosed shales.

angular discordance
See *angular unconformity.*

angular unconformity
An unconformity in which younger sediments rest upon the eroded surface of tilted or folded older rocks.

anhydrite
Anhydrous calcium sulphate; a common mineral in evaporite deposits, usually occurring in massive beds.

anorthosite
A coarse-grained igneous rock composed almost entirely of soda lime–based feldspar, distinctive in its lack of quartz.

anticline
A fold in the layers of rock caused by deformation of the earth's crust. The older strata are found towards the centre of the fold.

antimony
A native metallic element, and mineral, that occurs in silvery or tin-white granular, platy, or shapeless masses.

aplite
Generally refers to a dyke rock made almost entirely of light-coloured minerals and with a characteristic fine-grained granitic texture.

Appalachian
A name derived from the Appalachian mountain system of northeastern North America and applied to the Appalachian geological region of North America, of which Nova Scotia is a part.

aquifer
A layer of wet sand or porous rock below the earth's surface capable of producing water, as for a well.

arable soil
Soil suitable for ploughing and cultivation.

arctic-alpine
Referring to a geographic range for plants and animals. Includes those typically found north of the tree-line and at high elevations; found in habitats with climatic conditions resembling those of the arctic or high elevations.

arctic-boreal
Referring to a range of plants and animals. Includes those found in climatic conditions resembling that above the tree-line (tundra) or within the northern coniferous forest just south of the tundra.

arsenopyrite
A mineral of iron, sulphur, and arsenic commonly associated with metamorphism around igneous intrusions as in the quartz veins of the Meguma Zone of Nova Scotia.

arthropods
Members of a major group or phylum of invertebrate animals with hard exoskeletons, segmented bodies, and jointed appendages; includes crustaceans, insects, spiders, etc.

association
A group of species living in the same place.

Aufwuchs
A German word applied by ecologists to small organisms found on the surfaces of aquatic vegetation, etc., in freshwater habitats.

aureole
An area surrounding an igneous intrusion where changes to the original rock have been caused by heat from intruding magma; synonymous with contact zone.

autotrophic
Said of organisms that use sunlight to create food.

avifauna
All bird species.

baleen whales
Whale species that use a hairy plate to sieve small fish and invertebrates from water.

banks, offshore
Generally a large elevated area on the sea floor surrounded by deeper water; a submerged plateau or shelf.

bar
Submerged or emerged embankment of sand, gravel, or other unconsolidated material built in shallow water by waves and currents.

barachois pond
A small lagoon formed when spits created by currents that meet on a straight shoreline coalesce into an enclosing triangular beach.

barite
An industrial mineral, the principle ore of barium, used in textiles, paints, drilling muds, and pharmaceutical products.

barrier beach
A stretch of sand dune or cobble bar that separates a coastal body of water from ocean waters in all but exceptionally high tides, or during storms.

basal till
The bottom layer of glacial till deposited on an eroded bedrock surface.

basalt
A fine-grained, sometimes glassy, basic (i.e., low in silica content) igneous rock.

basement rocks
Older igneous and metamorphic rocks (mainly Precambrian) that are generally covered unconformably by younger sedimentary rocks.

batholith
A large intrusion of igneous rock, usually granite, with 100 km^2 or more of surface exposure.

bathymetric
Data on the depth of a body of water obtained through the measurement and charting of the topography of the bottom.

baymouth bar
A bar extending partially or fully across the mouth of a bay.

beach
A gently sloping area of unconsolidated material, typically sand, but also cobble or shingles, that extends landward from the water to where a marked change in material or form occurs, or to the line of permanent terrestrial vegetation.

beach terrace
A terrace or flat, horizontal surface formed when an old shoreline has been isolated by lowering sea levels.

bedforms
Any deviation from a flat bed, generated by the flow of an alluvial channel.

bedrock
Any solid rock exposed at the surface of the earth or overlain by unconsolidated material.

bench
See terrace.

benthic
Living at the bottom of a fresh or salty body of water.

benthos
Plants and animals that live on, in, or attached to the sea bottom.

berm
A low, incipient, nearly horizontal or landward-sloping area, or the landward side of a beach, usually composed of sand deposited by wave action.

bioclimate
A small-scale climatic condition generated by living organisms.

biodiversity
The variety of life in all its forms contained within a given space at a particular time.

biomass
1. The quantity of living and/or dead organic matter in an ecosystem. 2. A measure of the dried weight of all organic matter in an ecosystem.

biophysical
Refers to a hierarchial land classification system with units characterized by distinct biotic and abiotic elements.

biotite
A widely distributed rock-forming mineral of the mica group. It is generally black, dark brown, or dark green and forms a component of crystalline rocks (either as an original crystal in igneous rocks, or as a product of metamorphic origin in gneisses and schists) or a detrital component of sedimentary rocks.

bivalve
A mollusc with two shells, for example, a clam or mussel.

bloom
Rapid growth of a population of planktonic organisms, usually, but not limited to, phytoplankton.

bluff
A cliff with a broad face, or a relatively long strip of land rising abruptly above surrounding land or water.

boreal
Refers to species characteristic of the biogeographical area that extends across northern Canada south of the tundra.

boulders
Rock fragments larger than 60 cm in diameter.

brachiopods
Marine animals with two unequal shells or valves that are normally bilaterally symmetrical. They range in age from lower Cambrian to Present.

brackish water
Salty water with less salt than seawater.

brownwater lake
See *dystrophic.*

bryophytes
A division of the plant kingdom that includes mosses and liverworts. Plants with rhizoids rather than roots, and little or no vascular tissue.

Bryozoa
A phylum of tiny colonial animals that build calcareous structures of many kinds, mostly marine, ranging in age from Ordovician to Present.

buffering capacity
Ability to neutralize acidic input.

buoyancy
Ability of things to float in a liquid; applied to the tendency of less-dense water to remain above denser water in the ocean.

calcareous
Containing salts of calcium, for example, calcium carbonate as limestone rock or derived soil.

Cambrian
The period that extended from at least 580 million years ago to 500 million years ago.

canopy
The top layer formed by the tallest trees in a forest.

capability class
A rating that indicates the capability of land for some use such as agriculture, forestry, recreation, or wildlife. In the Canadian system, it is a grouping of lands with the same relative degree of limitation or hazard. The degree of limitation or hazard is nil in Class 1 and becomes progressively greater to Class 7.

carbonate
A rock (e.g., limestone, dolostone) consisting of carbonate minerals, e.g., calcite, dolomite.

carbon cycle
The cycle whereby carbon dioxide is fixed in living organisms by photosynthesis or chemosynthesis; is consumed in carbohydrate, protein, and fat by most animals and plants that do not carry out photosynthesis; and ultimately is returned to its original state when freed by respiration and by the death and decay of plant and animal bodies.

Carboniferous
A geological period extending from 370 to 270 million years ago.

Carboniferous sea
A marine incursion during the early Carboniferous Period that formed an inland sea where deposition of limestone, salt, gypsum, and anhydrite occurred.

carnivores
Animals and a few plants that consume dead or living animal food.

catchment basin
See *drainage basin.*

catena
A non-taxonomic group of soils about the same age, derived from similar parent materials and occurring under similar climatic conditions but having unlike characteristics because of variations in relief and drainage.

centripetal
A force that makes a moving body move in a circular manner towards the centre.

cephalopod
One of the Cephalopoda. A marine invertebrate characterized by a head surrounded by tentacles and, in most fossil forms, by the presence of a straight or spirally coiled, calcareous shell divided into numerous interior chambers; ranges in age from Cambrian to present.

chain lakes
A series of connected lakes.

chlorite
A group of platy, usually greenish minerals associated with and resembling micas. Chlorites are widely distributed and are often found in low-grade metamorphic rocks.

Cladocera
Order within the class Crustacea that includes the water flea.

clastic
Usually refers to rocks composed of pre-existing rock fragments produced from weathering and erosion.

clay
1. A mineral soil particle less than 0.002 mm in diameter. 2. A soil textural class containing 40 per cent or more clay, less than 45 per cent sand, *and less than* 40 per cent silt.

cleavage
The tendency of a mineral to break along planes of weak bonding.

climax forest
A forest whose composition is more or less stable and is in equilibrium with existing environmental conditions.

coal seam
A stratum or bed of coal.

coastal fresh marsh
A tidal marsh moderated by the effects of freshwater runoff.

coastal plain
An area of relatively low land of variable width lying between uplands and the sea. In northeastern North America much of the coastal plain has been submerged as a result of post-glacial sea-level change. The term is often used in connection with distinct associations of plant species—coastal-plain flora—whose range extends from Nova Scotia to Florida at sea level. In Canada, their range is limited to the Great Lakes Basin and southwestern Nova Scotia.

coastline
The boundary between the coast and shore, or land and water.

cobbles
Water-worn rock fragments 7.5–25 cm in diameter.

co-dominant
Forming part of the main structure of a plant community, e.g., the canopy of a forest; sharing in the controlling influence of a biotic community.

colluvial deposit
Weathered material deposited by gravity; e.g., a talus slope.

community
An association of interacting populations, usually defined by the nature of their interaction with the place in which they live.

conductivity
A measure of the ability of waters to conduct electricity. It increases as the amount of dissolved minerals (ions) increases. The micromho is the inverse of the measure of resistance, the ohm.

conglomerate
A coarse-grained (greater than 2 mm), clastic sedimentary rock containing rounded fragments set in a fine-grained matrix that is often cemented with calcium carbonate.

contact
The place or surface where two types of rock come together.

contact zone
See *aureole.*

contour
A line drawn on maps that joins points of equal elevation.

convection
Movement of portions of a fluid as a result of density differences produced by heating. Applied to circulation in the atmosphere, lakes, and oceans.

copepods
A group of mostly free-living planktonic crustaceans that forms an essential link in the food chains of lakes and ocean.

Cordilleran flora
Plants characteristic of boreal deciduous woods, which are common on the Pacific coast and in the Rocky Mountains.

cordierite
A common mineral in metamorphic rocks, considered an indication of intensive heat and pressure. A magnesium-iron-aluminum silicate.

Coriolis effect
The tendency of all particles in motion on the surface of the earth to be deflected to the right in the Northern Hemisphere and to the left in the Southern Hemisphere.

COSEWIC status
The status or rank (e.g., extinct, extirpated, threatened, endangered, or rare) given to species of wildlife by the Council on the Status of Endangered Wildlife in Canada (COSEWIC).

country rocks
Generally refers to rocks invaded by igneous intrusions.

Cretaceous
The geological time period between 140 and 65 million years ago.

crinoids
Any of various marine invertebrates of the class Crinoidea, ranging in age from Ordovician to Present, which includes sea lilies and feather stars. They are characterized by feathery, radiating arms and a stem attached to a surface.

crustacean
An invertebrate animal with a hard exoskeleton and at least five pairs of jointed legs on the thorax, includes crabs, lobsters, copepods, amphipods, and isopods.

crustal plates
Major regions of the earth's crust that move relative to each other.

cryoboreal
Refers to species characteristic of the colder parts of the Boreal Zone.

cryogenic action
Disturbance of surface rock, sediment, or soil by alternate freezing and thawing; a daily or seasonal cycle in cold temperate and arctic regions.

crystalline rocks
1. Rocks consisting of minerals in an obviously crystalline state. 2. An inexact term for igneous and metamorphic rocks, as opposed to sedimentary rocks.

cuesta
An asymmetrical ridge with one steep face (an escarpment slope) and an opposite, gently inclined face (a dip-slope).

cultural landscape
A landscape that strongly reflects the past and present land uses of the people who live in it; usually includes cultivated land with patches of natural or managed land.

cupola
A small, dome-like rock formation projecting from an igneous intrusion.

current
Movement in a body of water caused by major ocean circulation or tides, by waves along shorelines, and by gravity-induced flow in rivers.

decollement
The independent disruption by folding or faulting of sedimentary rocks when they slide over underlying rocks.

decomposer
An organism (often bacteria or fungi) responsible for the breakdown of organic material, releasing water, carbon dioxide, and nutrients in an ecosystem.

degradation
The decline in a soil's fertility as a result of loss of organic matter, erosion by wind or water, compaction, salinization, contamination, or acidification.

degree-days
The highest temperatures recorded for each of the days of the year at a particular place, totalled together to estimate the length of the growing season.

delta
A large alluvial deposit, roughly *triangular in* shape, formed at the mouth of a river.

dendritic drainage
A river or stream tributary pattern resembling the branching of certain hardwood trees.

denudation
The combined action of all the processes that wear away and lower the land, including weathering, mass wasting, stream action, and groundwater activity.

deposit
Any matter laid down; a mineral deposit is generally a natural occurrence of a mineral that is sufficiently abundant or useful to warrant exploitation.

deposition
The laying down of potential rock-forming materials; synonymous with "sedimentation."

deranged drainage
Drainage patterns associated with impermeable, poorly jointed rocks such as slate, granite, and greywacke where surface water is retained in a disorganized series of streams, lakes, and wetlands.

detrital
Referring to minerals in sedimentary rocks that were derived from igneous, other sedimentary, or metamorphic rocks.

detritivore
Animals that feed primarily on fragments of organic matter (detritus) found in soil and bottom sediments.

detritus
Dead or decaying organic matter from plants and animals.

Devonian
The geological time period between 415 and 370 million years ago.

diabase
An intrusive rock, usually occurring in dykes or intrusive sheets; characterized by lath-like feldspar minerals oriented in all directions, with darker minerals in the spaces between.

diatoms
A large and diverse division of microscopic and unicellular algae found in both fresh and salt water. The cell wall is heavily impregnated with silica, and dead cells accumulate on the seabed and eventually form deposits of diatomaceous earth. Living diatoms are abundant among the plankton and are an essential part of food chains in the sea.

***differential* erosion**
Occurs when rocks are not uniform in character and are softer or more soluble in places; causes an uneven surface to develop from erosion or weathering.

dinoflagellates
Microscopic unicellular algae with bodies encased in tough, sculptured cellulose plates and with a whip-like flagellum that facilitates movement. Most are marine and seasonally form an important part of the plankton. Some species are so abundant that they form the basis of red tides and the associated paralytic shellfish poisoning.

diorite
A plutonic rock formed from an intrusion; salt and pepper in colour with dark and light crystals.

dip-slope
A slope of the land surface which approximately conforms to the angle at which the underlying rocks are inclined.

disjunct
An occurrence or population widely separated from the main geographic distribution.

dissected
Refers especially to plains or peneplains in the process of erosion after an uplift, resulting in an area cut into hills and valleys, or into flat uplands separated by valleys.

diurnal tide
A tide in which high water occurs only once a day at intervals of 24–27 hours.

dome
An anticline that is inclined downwards in all directions.

dominant
Refers to the principal species in a group of organisms.

downdraft
Downward movement of air as a result of convection.

drainage, soil
1. The rapidity and extent of the removal of water from soil by runoff or flow downward to underground spaces. 2. As a soil condition, the usual moisture condition of the rooting zone.

drainage basin
The land area that contributes water to a stream or lake system or directly to the ocean; also referred to as a catchment basin.

drainage divide
A boundary between adjacent drainage basins or watersheds.

droughty
Dry conditions in the ground related to long periods of dry weather.

drowned estuary
An estuary that has become submerged under the sea by geological processes.

drumlin
A smooth hill formed from deposits of glacial till; the long axis parallels the direction of flow of the former glacier.

dune
A mound, ridge, or hill of windblown sand.

dyke
1. A tabular body of igneous rock that cuts across the structure of adjacent rocks. 2. A structure with a wall to keep water out and a ditch, used to drain intertidal wetlands.

dykelands
Lands impounded by dykes and commonly used for agriculture.

dystrophic
Refers to acidic fresh water that is strongly coloured by tannins and humic derivatives; also called a brownwater lake. Typified by high oxygen consumption and deficient bottom fauna.

ebb tide
The falling tide.

echinoderms
The phylum of invertebrate animals that includes starfish, sea urchins, sand dollars, and sea cucumbers.

ecology
The study of relationships between organisms and their environment.

ecosystem
The relationships among a particular assemblage of living organisms and the environment in which they live.

ecotone
An area of transition from one habitat to another.

edaphic
Factors pertaining to, or influenced by, soil conditions.

edge habitat
The area of transition from one wildlife habitat to another; an ecotone at the habitat level.

eluviation
The transportation of material in suspension or solution by the downward or lateral movement of water within soil.

embayment
An indentation in a shoreline that forms an open bay.

emergent coastline
A coast where land formerly below sea level has been exposed by crustal uplift, rise in sea level, or both.

emergent plant
A plant rooted in shallow water with much of the stem and most of the leaves above water.

encrusting algae
Species that forms a hard surface on the substrate.

end moraine
Ridge-like accumulation of till along the terminal margin of a glacier.

endemic
Confined to a specific geographic area.

eolian
Referring to the erosive action of the wind and the deposits such as sand, which are arranged by the wind. *Subaerial* is often used synonymously.

epibenthic
Living on the bottom surface of lakes or the ocean.

epifauna
Animals that live attached to or rove over the surface of a sea or lake bottom.

epiphyte
A plant that lives wholly but non-parasitically on other plants, usually above ground.

ericaceous
Species of woody (often evergreen) shrubs commonly associated with bog and barren habitats belonging to the Ericaceae, the blueberry family.

erosion
The wearing away and removal of material on the earth's surface by forces such as running water, wave action, moving ice, or winds.

erratic
A large rock or boulder that has been transported some distance from its source, usually by glacial action.

escarpment
A steep slope.

esker
Long, winding ridges of sand and gravel which originated within or beneath glacial ice.

estivate
A period of dormancy in cold-blooded animals during dry conditions; the metabolic rate is not decreased, but metabolism may become anaerobic, creating an oxygen depth.

estuary
A bay at the mouth of a river formed by subsidence of the land and/or a rise in sea level. Fresh water from the river mixes with the salt water of the sea, giving brackish or low salinity conditions.

euphotic zone
A zone of surface water in a sea or lake where sufficient light penetrates to allow photosynthesis to occur. The depth of the zone is limited by the clarity of the water.

eutrophication
The process of increasing the nutrient concentration of a freshwater environment. This process occurs naturally as a part of the system's successional sequence. The rate of eutrophication can be accelerated by the introduction of artificial nutrients or pollutants.

eutrophic
Referring to fresh waters: high productivity as a result of an abundant supply of nutrients.

evaporite
A rock composed of minerals derived from the evaporation of mineralized water; examples are rock salt and gypsum.

evapotranspiration
The release of water from the surfaces of plants, soil, and other objects; an essential part of the hydrological cycle.

exotic species
Species that do not normally occur in an area.

extirpated
Locally extinct.

facies
1. Part of a rock body differentiated from other parts by appearance or composition; can refer to one part of a rock body, different kinds of rocks, or stratigraphic bodies. 2. A lateral subdivision of a stratigraphic unit.

fault
A fracture or zone of fractures in the earth's crust along which movement has taken place.

fault block
A mass or body of rock bounded on at least two opposite sides by faults; it may be elevated or depressed relative to the adjoining land.

faulting
Movement which produces relative displacement of adjacent rock masses along a fracture.

feldspar
A group of rock-forming minerals, considered to be the most abundant of all minerals. All are aluminum silicates of soda, potash, or lime and all are closely related in structure and composition. Feldspars are the principal constituents of igneous and plutonic rocks.

felsite
A general term used to describe a light-coloured igneous rock.

ferro-humic
Typically acidic, stony, and well-drained soils with a high organic content; associated with upland igneous or metamorphic rocks and deciduous forests.

fetch
The distance in a given direction over which wind can generate waves in water.

filter feeder
An organism that obtains its food by straining particles from the water.

first-order stream
The main, unbranched section of a river or stream.

floodplain
The land bordering a stream, built up of sediments from stream overflow and subject to inundation when the stream floods.

flood tide
The rising tide.

floral element
A component of the vegetation of a region that has a distinct assemblage of species determined by climate and site conditions. For example, in the highlands of Cape Breton Island, the association of Black Spruce, Balsam Fir, White Spruce, poplar, and birch forms a Boreal element of the Acadian Forest Zone.

fluvial
Pertaining to rivers.

fluvial deposits
All sediments, past and present, deposited by flowing water, including glaciofluvial deposits.

fluvioglacial deposits
See *glaciofluvial deposit.*

flux
Continuous motion or change, applied to the rate of flow in fluids.

fold
A bend in strata or any plane surface.

foliated
A layered appearance in a metamorphic rock that results from the parallel segregation of minerals.

foraminifera
Unicellular animals, mostly microscopic and marine, that secrete hard coverings composed of calcium carbonates or build them of cemented sedimentary grains. They range in age from Ordovician to Present.

forb
An herbaceous plant other than grasses; a broad-leaved herb.

foreshore
That part of the shore between the upper limit of wave-wash at high tide and the ordinary low water mark.

formation
A mappable rock unit.

fossiliferous
Containing fossils.

fossil
Any evidence preserved in rock of a once-living organism.

fragipan
A natural subsurface horizon having a higher density than the soil above; cemented when dry but showing brittleness when moist. This layer is low in organic matter and slowly permeable to water; it usually has polygon-shaped bleached cracks.

front
A sharp boundary between water masses of different properties.

frost pocket
A low-lying area of land that collects cold air flowing from surrounding elevated areas and is usually subject to early and late frosts.

garnet
A family of minerals—silicates of aluminum, iron, manganese, chromium, calcium, and magnesium—occurring as accessory minerals in a wide range of igneous rocks and as the finest crystals in some metamorphic rocks.

geochemical
Referring to alterations in the earth's crust as a result of chemical changes; focused on the distribution of the elements.

geodetic
Referring to the shape and dimensions of the earth.

geomorphology
The form of the earth, the general configuration of its surface, and the changes that take place in the evolution of land forms.

geosyncline
A large, generally linear trough that subsided deeply over a long period of time during which a thick succession of stratified sediment accumulated; the strata may have been folded into mountains. Also refers to the stratigraphic surface that subsided in such a trough.

glacial lake
A lake formed either from a basin scoured out by glacial ice or from the damming of natural drainage by glacial till.

glacial till
Nonsorted, nonstratified sediment carried or deposited by a glacier.

glaciofluvial deposit
Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. These deposits are stratified and may occur in the form of outwash plains, deltas, kames, eskers, and kame terraces.

gleyed soil
An imperfectly or poorly drained soil modified by reduction, or alternating reduction and oxidation. These soils have lower chromas or more prominent mottling, or both, in some horizons than the associated well-drained soil.

gleying
A soil-forming process that operates under poor drainage conditions and results in the reduction of iron and other elements, and in grey colours and mottles.

gleysols
An order of soils developed under wet conditions and permanent or periodic reduction. These soils have low chromas or prominent mottling, or both, in some horizons.

gneiss
A coarse-grained metamorphic rock with a characteristic discontinuous layered structure and a composition generally similar to granite.

graben
A steep-sided, flat-bottomed valley formed between parallel faults.

gradient
A gradual change with distance.

granite
An intrusive rock consisting mainly of alkali feldspar and quartz. The term may be loosely used for any light-coloured, coarse-grained igneous rock.

granodiorite
An igneous rock intermediate in composition between a granite and a diorite.

graptolite
An extinct colonial organism that produced enclosing or supporting structures from a nitrogenous substance similar to fingernails.

gravel
Rock fragments 2 mm to 7.5 cm in diameter.

gravitational
Controlled by the effect of gravity.

greywacke
An impure sandstone consisting of rock fragments and grains of quartz and feldspar in a matrix of clay-sized particles.

ground cover
Those herbaceous plants, small shrubs and non-vascular plants growing beneath the tree and shrub canopy.

ground moraine
Rolling plain that has gently sloping swells, sags, or basins made of till.

groundfish
Fish that feed on or near the sea bottom.

groundwater
Water in the zone of saturation where all open spaces in sediment and rock are completely filled with water.

groundwater recharge
The intake and quantity of water added to the zone of saturation below the land surface.

groundwater seep
A spot where groundwater oozes from the earth, often forming the source of a small stream or spring.

gypsum
Commonest sulphate mineral ($CaSO_4 \cdot 2H_2O$). Associated with halite and anhydrite in evaporite deposits.

gyre
A gyration, or circular or spiral movement, within a medium; applied to movement at the margins of ocean currents.

habitat
The natural home or environment of a plant or animal.

halite
A mineral commonly associated with evaporates; rock salt.

halophyte
A plant tolerant to saline conditions, for example, in a salt marsh.

hardpan
A layer of strongly cemented material that occurs in unconsolidated sediments.

hardwood
A forestry term for deciduous, broad-leaved trees such as oak, maple, and birch and the forests they form.

headland
A high, steep-faced promontory extending into the sea.

hematite
The principal ore of iron, with the composition Fe_2O_3.

herbaceous
Descriptive of non-woody plants with no above-ground persistent parts.

herbivore
An animal which feeds on living plant material.

heterotrophic
Dependent on organic matter for food.

highwater line
The level of highest water on a shore; the high-tide line of the sea and the high-flood line of streams or lakes.

hornblende
A common member of the amphibole rock-forming minerals; usually black, dark green, or brown and found in igneous and metamorphic rocks.

hornfels
A dense, compact rock produced from slate by contact with an intrusion, especially of granite.

humo-ferric
Of soils associated with rolling plains, till features, and forest cover on coarse-textured, iron-rich parent material. Typically moderately well to rapidly well drained and very acidic, with less organic matter accumulated in the mineral layer than in ferro-humic soils.

humus
Organic detritus in soil.

hydric
Characterized by abundant moisture.

hydrocarbons
Naturally occurring hydrogen- and carbon-based complex liquids and gases created through the burial and heating of fine-grained rocks rich in organic matter.

hydrography
The mapping of the characteristics of oceans, lakes, and rivers.

hydrology
The study of the occurrence and properties of water.

hydrophytic
Refers to plants whose habitat is water or very wet places.

hydrosere
The natural zonation of vegetation at the edges of freshwater habitats.

hydrothermal
Referring to processes, solutions, rocks, deposits, and springs associated with heated or hot materials that are rich in water.

IBP Proposed Ecological Site
A reserve proposed by the Canadian Committee for the International Biological Programme. An ecological reserve is a legally protected natural area where human influence is kept to a minimum. Its purpose is to preserve characteristic or regionally rare ecosystems. Ecological (Nature) Reserve sites are protected in Nova Scotia under the Special Places Act.

ice-contact drift
Any rock material deposited in contact with melting glacier ice.

ice-plucked
Moved from its original site by glacial ice.

***igneous* rock**
One of the three main groups of rock. Igneous rocks characteristically appear crystalline and were formed by the crystallization of magma.

ignimbrite
Rock consolidated from volcanic material which was so hot that the fragments welded together.

illite
A general term that refers to the group of minerals that is abundant in sediments composed mostly or entirely of clay.

impoundment
A structure built to maintain desired water level; commonly used in waterfowl management.

infauna
Benthic animals that burrow into the substrate.

infiltration rate
The maximum rate at which soil can absorb surface water.

interbedded
Occurring between beds or lying in a bed parallel to other beds of a different material.

interglacial
Refers to the time between glaciations.

intermontane
Lying between mountains.

intertidal zone
The area between low- and high-tide marks, alternately covered by water and exposed to air during each tidal cycle.

intolerant
See *shade-intolerant.*

introduced species
Non-native species brought into an area intentionally or accidently by humans.

intrusion
A body of igneous rock that has forced itself into pre-existing rocks.

invertebrate
An animal without a backbone.

ironpan
A compact layer in the soil horizon with a platy structure and very low permeability that impedes drainage and root penetration.

isobar
A line drawn on atmospheric charts to connect points of equal barometric pressure and determine the locations of high and low pressure areas.

isopods
A group of crustaceans that includes wood lice.

isostatic
Related to the state of equilibrium, resembling flotation, in which segments of the earth's crust stand at levels determined by their thickness and density. During the last ice age, the ice depressed the earth's crust, upsetting the isostatic equilibrium.

joint
A fracture in a rock along which there has been no movement.

Jurassic
The geological period between 210 and 140 million years ago.

kame terrace
A terrace-like body of material deposited at the side of a valley by melted water that flows along the surface of a glacier.

kames
Steep-sided mounds of stratified material deposited against an ice-front.

kaolinite
A common clay mineral.

karst topography
A landscape typical of gypsum and limestone areas, where sinkholes have formed as a result of the dissolution of rocks by rainwater; narrow, crumbling ridges separate the sinkholes.

kettle hole
A bowl-shaped depression created when blocks of ice become lodged in glacial deposits and melt, leaving a depression.

knoll
1. A submerged, rounded elevation rising from the sea floor. 2. A small, rounded hill, often associated with resistant rock.

krummholz
A condition where trees growing in exposed areas exhibit an asymmetrical outline and stunted growth. Occurs as a result of extreme conditions such as high wind and salt spray.

lacustrine
Of lakes.

lacustrine deposits
Material deposited by or settled out of lake waters and exposed by the lowering of water levels or the elevation of land. These sediments range in texture from sand to clay and are usually varied (layered annual deposits).

lagoon
See *barachois pond.*

landscape
A heterogeneous land area composed of interacting systems repeated in similar form throughout. Landscapes vary in size.

landscape ecology
A study of the structure, function, and change in a heterogeneous land area composed of interacting ecosystems.

landscape element
The basic, relatively homogeneous ecological unit, whether of natural or human origin, on land at the scale of a landscape; includes matrix, patch, and corridor elements.

lava
Fluid rock, or magma, such as from a volcano or a fissure in the earth's surface; also, the same material solidified by cooling.

leaching
The process by which rain and the substances dissolved in it gradually break down and decompose rocks. Materials may be removed from soil by leaching.

lentic
Related to slow-moving water, such as in lakes and bogs.

limestone
A bedded sedimentary deposit consisting chiefly of calcium carbonate.

limnetic
Related to the environment of lakes and ponds.

lithosphere
The crust of the earth, up to 100 km.

lithostratigraphic
Consisting of stratified and mainly sedimentary rocks grouped on the basis of physical rather than biological characteristics or time.

littoral
The zone between the extreme high-tide and extreme low-tide levels in the sea; also the zone from the shore to the light-compensation level of the sea and lakes.

loam
A soil mix of coarse sand, silt, clay, and organic matter.

loess
Deposits composed primarily of windblown silt and lacking visible layers.

lotic
Related to fast-moving water, such as in most streams and rivers.

lumbricid
A general term for the oligochaete worms of the Lumbricidae which include familiar earthworms.

Luvisols
An order of soils that have a clay accumulation in the B horizon. These soils develop under forests or forest-grassland transition areas in a cool climate.

macrophyte
Large plants (e.g., seaweeds, herbs, trees), in contrast to small plants such as lichens and mosses.

macrotidal
An ocean system which features a large tidal range, as in the Bay of Fundy.

magma
Molten rock material, including dissolved gases and crystals, generated within the earth and capable of intrusion and extrusion; considered the source of igneous rocks.

magnetite
Magnetic iron ore, frequently associated with igneous rocks; a black iron oxide with a metallic lustre.

marine
Associated with the sea.

marine transgression
The advance of the sea over coastal land areas as a result of rising sea levels or the subsidence of the land.

massif
A massive block of bedrock; usually a large landscape feature.

mature soil
A naturally produced soil with well-developed horizons.

meander
A loop-like bend in a stream or river that develops when a watercourse flows through level land and erodes its floodplain.

mean high or low water
The average height of the high- or low-tide mark on seashores, determined over a 19-year period.

mean sea level
The average height of the surface of the sea for all tidal stages over a 19-year period, usually determined from hourly height readings.

meiofauna
Microscopic aquatic animal life of bottom and shoreline sediments.

meltwater
Water resulting from the melting of snow or glacial ice. Glacial meltwater often forms streams and carries rock material beyond active glaciers.

meromictic (meromyxia)
The condition in permanently stratified lakes.

mesa
Flat-topped hills, or mountains, cut off on one or more sides by steep escarpments.

mesic
Refers to habitats with plentiful rainfall and well-drained soils.

mesopelagic
Related to the mid-depths of the open ocean.

mesophyte
A plant which grows in conditions of average water supply.

mesothermal
Climate with a middle temperature range, a roughly warm and cold climate, as opposed to a more extreme tropical or arctic climate.

mesotrophic
Refers to fresh waters with moderate nutrient concentrations and productivity.

Mesozoic
The geological era between 247 and 65 million years ago.

metamorphic rocks
Rocks whose physical and chemical properties have been changed by elevated temperature and pressure.

mica
A group of minerals characterized by perfect cleavage in one direction and by the thinness, toughness, and flexibility of their elastic flakes.

micro-
Refers to microscopic organisms, including animals, plants, bacteria, and fungi, that are primarily single-celled, although some colonial and multi-celled organisms are included.

microclimate
The climate of a microhabitat.

microflora
Microscopic plant life, including bacteria and some fungi.

microhabitat
The parts of a habitat an individual organism encounters in the course of its activities.

micromhos/cm
See *conductivity.*

midden
A prehistoric garbage dump generally found along the coast in Nova Scotia, typically consisting of a pile of shells of predominantly shellfish species and other discarded items of bone, stone, and pottery deposited during prehistoric times by aboriginal peoples.

minerotrophic
Descriptive of a habitat where nutrients are intruded from ground water flow as opposed to exclusively rainwater (ombotrophic).

mixis
The process and pattern of annual water circulation in lakes; used as a classification scheme for lakes, e.g., a monomictic lake has one regular period of water circulation during a year.

molluscs
Unsegmented invertebrate animals that possess an external or vestigial calcium carbonate shell; they include clams, snails, sea slugs, and squid.

molybdenum
A metallic element of the chromium group. It resembles iron in its white colour, malleability, difficult fusibility, and capacity for forming steel-like alloys with carbon.

monadnock
An isolated hill that stands above the general level of a peneplain; erosion remnants of the original surface.

moder
A non-matted forest humus derived from plant remains.

monzogranite
A subdivision of the granites, typically pink in colour.

mor
A well-defined matted layer of organic deposits resting on mineral soil.

moraine
Accumulations of material, mainly till, deposited directly by glaciers.

morphology
1. The form of a living organism. 2. The external forms of rocks and landscape features.

mottles
Irregularly marked spots or streaks, usually yellow or orange, but sometimes blue. Mottles in soils generally indicate poor aeration and impeded drainage.

mudstones
Dark-grey, fine-grained shales that decompose rapidly and convert to mud when exposed to the atmosphere; they include clay, silt, and siltstone.

mull
A rich soil developed under mixed forests where a suitable supply of calcium is available.

Myriapoda
A group of diverse, many-segmented, and appendaged terrestrial arthropods, including centipedes, millipedes, and isopods.

neap tide
A tide near the time of quadrature of the moon with the sun. The neap tidal range is usually 10–30 per cent less than the mean tidal range.

nearshore
An indefinite zone that extends seaward from the shoreline to well beyond the breaker zone. It defines the area of nearshore currents.

nekton
Free-swimming pelagic animals in the ocean and large freshwater lakes; they include many invertebrate species but also fishes and whales.

nematodes
A large, widespread, and diverse group of free-living and parasitic unsegmented worms. They are particularly important in the soil and can be important pests of plants and parasites of humans and domestic animals.

nitrogen-fixing
Applied to bacteria that can facilitate the incorporation of atmospheric nitrogen into organic compounds. Classically associated with the root nodules of legumes such as beans.

nutrient
Any substance required by organisms for normal growth and maintenance.

offshore
In beach terminology, the comparatively flat zone of variable width that extends from the breaker zone to the seaward edge of the continental shelf; also used to describe the continental shelf and slope, as in "offshore hydrocarbon exploration."

offshore wind
A wind blowing from the land onto the water.

old-growth forest
A phase in forest development characterized by a multi-layered structure, old climax tree species, snags, and large amounts of coarse woody debris.

oligochaetes
The group of annelid worms that includes the earthworm.

oligotrophic
Refers to fresh waters with poor nutrient supply and low productivity.

ombrotrophic
Condition of an ecosystem that derives its nutrient input largely from rainwater; for example, raised bogs.

omnivore
An animal that can feed on almost anything, including living and dead plant and animal material.

onshore wind
A wind blowing from the water onto the land.

oolitic
A textural term for sedimentary rocks consisting largely of oolites, which are small spherical or ellipsoidal accretions resembling a fish egg. Oolites are calcareous, siliceous, and ferruginous.

Ordovician
The geological period from 500 to 435 million years ago.

organic carbon
Carbon derived from plant and animal residues.

organic matter
The organic fraction of the soil; includes plant and animal residues at various stages of decomposition, cells and tissues of soil organisms, and substances synthesized by the soil population.

orogeny
A period of mountain building, lasting tens of thousands of years.

ortstein
A type of hardpan that consists of organic matter cemented with iron and aluminium oxide.

Ostracoda
A class of crustaceans; small bivalve animals that live in both salt and fresh water.

outcrop
The place where a particular rock unit is exposed at the surface.

outwash
Sediments "washed out" beyond a glacier by flowing water and laid down in thin beds or strata; the particle size may range from boulders to silt.

overburden
The layers of surficial sediments that cover bedrock and need to be removed before mining can take place.

ovipositor
An elongated structure on some female insects that allows the precise placement of eggs.

oxbow lake
A lake formed when river meanders are cut off from the main channel.

paleo-
A combining form meaning old, ancient, early, primitive, or archaic.

paleo-environment
The environment of the geologic past.

paleo-Indians
The people who lived in Nova Scotia between 10,000 and 11,000 years ago.

Paleozoic
The geological era between the end of the Precambrian (600 million years ago) to the beginning of the Mesozoic (225 million years ago).

paludification
The transformation of land into marsh.

Pangaea
A hypothetical supercontinent of past eras that was later fragmented by continental drift.

parent material
The unconsolidated and more or less chemically unweathered mineral or organic matter from which soil has developed.

parallel drainage
A drainage pattern in which streams flow nearly parallel to one another over an area; commonly associated with a pronounced slope.

particle size, soil
The grain-size distribution of the whole soil, including the coarse fraction. It differs from *texture*, which refers to the fine earth (less than 2-mm) fraction only.

passerines
Perching birds.

peat
A dark-brown or black organic material produced by the partial decomposition and disintegration of mosses, sedges, and other plants which grow in marshes and wetlands.

pedology
The aspects of soil science that involve the constitution, distribution, genesis, classification, and mapping of soils.

pedon
The smallest three-dimensional unit at the surface of the earth that is considered to be a soil.

pegmatites
Coarse-grained igneous rocks usually found as dykes associated with a large mass of fine-grained plutonics. Unless specified otherwise, the name usually means granite pegmatites.

pelagic
Living and feeding in the water column, as opposed to living associated with a sea or lake bottom.

Pelecypoda
A class of the phylum Mollusca; bivalves including mussels, clams, and oysters.

peneplain
A smooth, rolling erosion surface that develops late in the cycle of erosion.

perhumid
A type of climate that has humidity values of +100 and above; the wettest type of climate.

permafrost
Permanently frozen ground.

permeability
The ability of a substrate to allow a solution to pass through it.

Permian
The geological period between 290 and 247 million years ago.

pH
The intensity of acidity and alkalinity, expressed as the negative logarithm of the hydrogen ion concentration. A pH of 7 is neutral; lower values indicate acidity and higher values alkalinity.

phyllite
A fine-grained, foliated metamorphic rock intermediate between mica schist and slate; not as tough as slate. Mica crystals give a silky sheen to the cleavage surface.

physiography
Description and interpretation of landforms.

phytogeographic
Referring to the distribution of plant species.

phytoplankton
Microscopic plants that float or drift almost passively in oceans, lakes, or rivers.

pillow lava
Basaltic lava that solidifies under water and develops a structure that resembles a pile of pillows.

pioneer
Refers to species that colonize bare substrate.

Pleistocene
A division of the Tertiary period of geological history during which glaciation occurred, ranging from 0.1–1.8 million years ago.

placer
An alluvial or glacial deposit containing particles of gold or other valuable minerals.

planation
The grading of an area by any erosive process, subaerial or marine.

plankton
Suspended, free-floating, and microscopic aquatic organisms.

plate tectonics
The theory that the earth's outer shell consists of plates which interact in different ways to produce earthquakes, volcanoes, mountains, and the crust itself.

plucked
See *ice-plucked.*

pluton
A large igneous intrusion.

pocket beach
A small beach formed in an indentation of a coastline.

pockmark
A feature of the offshore sea-bottom that resembles a round, crater-like depression up to 300 m across and 1–30 m deep

podzols
Soils formed in cool, wet conditions, with a strongly developed leached zone.

podzolic
An order of soils having accumulations of amorphous combinations of organic matter, aluminum, and iron in the B horizon.

polychaetes
Worms with true body segments and hard spines; mainly marine.

pothole
A circular feature worn into solid rock by sand, gravel, and stones that have been spun around by water currents.

Precambrian
The period of time between the consolidation of the earth's crust and the beginning of the Cambrian period; about 4 billion years in duration.

primary production
The rate at which energy from light is absorbed and used with carbon dioxide to produce organic matter in photosynthesis.

primitive plants
Species that developed early in the evolutionary history of plants.

productivity
Rate of production of new biomass by populations of organisms.

profile, beach
The intersection of the ground surface with a vertical plane; may extend from the top of the dune line to the seaward limit of sand movement.

profundal
The deepest parts of lakes and the ocean.

progradation
A seaward advance of the shoreline that results from the deposition of sediments nearshore by rivers.

protozoa
A large, diverse, and widespread group of mostly microscopic non-cellular animals, including both free-living and parasitic forms.

provincial park
A legally established park administered by a province.

pyrite
A brass-yellow mineral with a bright metallic lustre that usually occurs in veins of all classes of rocks; often associated with gold mining and referred to as fool's gold.

quartz
A very hard, glassy-looking mineral; crystallized silicon dioxide; constituent of all acidic igneous rocks and some intermediate and basic rocks; common in metamorphic rocks, as a veinstone, and as a dominant constituent of sandstone (the sand grains are quartz).

quartzite
A granulose metamorphic rock made essentially of quartz.

radial drainage
The drainage pattern where streams radiate from a central area, in particular from a rounded upland area.

raised beach
A wave-cut platform raised above the present sea level.

range
1. Applied to tides: the difference in height between consecutive high and low waters. The "mean range" is the difference in height between mean high and mean low water marks. 2. Applied to animals: the area around an animal's nest or burrow used for feeding and other daily activities ("home range"); also the larger area used by migratory species. 3. With reference to plants: Complete distribution for a given landmass.

rare
Applied to a species infrequently seen in a suitable habitat. The term is usually qualified to reflect the area observed; for example, a species "rare in Nova Scotia" is not necessarily "rare in Canada."

rectangular drainage
A drainage pattern characterized by right-angle bends in both the main stream and its tributaries; common in permeable, well-jointed rocks such as limestone, sandstone, and gypsum; also referred to as *trellised drainage.*

red bed
Term applied to red sedimentary rocks, usually sandstones and shales.

refugium
A locality that has escaped drastic alteration following climatic change, in contrast to the region as whole (plural *refugia*).

regeneration
The recovery of vegetation after natural or human disturbances such as cutting or fire. Succession proceeds towards the climax state as far as site conditions will permit.

rejuvenation, stream
Occurs when a mature river encounters a geological obstacle such as resistant rock and renews erosive activity, producing a waterfall or rapids.

relative sea level (RSL)
Position of sea level relative to the land. RSL change measures the land movement versus the water movement over time.

relict
An occurrence that represents localized remains of an originally much wider distribution.

remnant population
See *relict.*

remote forcing
Referring to currents that arise as a result of a force or forces from a non-local or remote area.

reserve
Crown land reserved for park development.

rhyolite
An extrusive igneous rock equivalent in composition to granite, in which the crystalline constituents are too small to be distinguished with the unaided eye.

riffle
A shallow section in a river or stream where the water flows swiftly; may be less turbulent than rapids.

rift
An area of the earth's crust along which divergence is taking place, allowing a fault plane to intersect with the surface.

riparian
Ecological term associated with riverbanks; used in connection with plant and animal habitat.

rotifers
Members of the invertebrate phylum Rotifera. Important among freshwater plankton and in nutrient recycling in aquatic systems. They are minute, less than one millimetre in length, and usually transparent.

runoff
Water that flows over land rather than infiltrating into the ground.

saddle
The area between marine banks.

salinity
The "practical salinity unit" measures the amount of salt in marine waters. It has the same numerical value as the old measure of parts per thousand (by weight), except in very saline and very dilute waters when the difference is, at the most, 0.06 units.

salmonid
Any member of the family of fish Salmonidae, which includes salmon and trout.

salt marsh
Marshland periodically flooded by saline tidal water and characterized by organisms tolerant to saline conditions.

sand
1. A mineral soil particle between 0.05 and 2.0 mm in diameter. 2. A soil textural class containing more than 85 per cent sand and less than 10 per cent clay.

sand ridge
A long, sinuous offshore feature that stretches over wide areas of the seabed and is formed in extreme conditions, such as by subsurface tides.

sandstone
A sedimentary rock composed predominantly of sand-sized quartz grains.

sand wave
An offshore bottom feature caused by storms and tidal currents. Sand waves on the Scotian Shelf can be from 0.5–12 m high and from 12 m to 1 km long.

saprophyte
A plant that derives nutrients from organic material and cannot photosynthesize.

scarp
A steep slope.

schist
A medium- to coarse-grained metamorphic rock with strong foliation that results from a parallel orientation of platy minerals such as micas.

scour
Removal of material by waves and currents, especially at the base of a shore structure.

scree
See *talus.*

second-order stream
Tributary initiated by the confluence of two first-order streams.

sedimentary
One of the three main groups of rock; rocks formed of material derived from pre-existing rocks by processes such as weathering, erosion, and precipitation.

seepage site
A place where water oozes from the earth, often forming the source of a small trickling stream.

semi-diurnal tide
Tide in which high water occurs twice daily with intervals averaging 12.4 hours.

seral stage
A stage of development in the successional process (sere) recognized by distinct soil and water conditions and associations of plants and animals.

sessile
Attached directly to a base without a flexible joint; used when describing parts of organisms, such as leaves or flowers.

shade-intolerant
Refers to trees that require full sunlight to reproduce and thrive.

shade-tolerant
Refers to trees that can reproduce and thrive in partial sunlight or shade.

shale
A laminated sediment composed predominantly of clay-sized particles.

shell midden
See *midden.*

sill
A sheet-like body of igneous rock which conforms to bedrock or other structural planes.

sillimanite
An aluminum silicate mineral usually found in fine fibrous masses and associated with intensely metamorphosed mica schists and gneisses and contact-metamorphic deposits.

silt
1. A mineral soil particle between 0.002 and 0.05 mm in diameter. 2. A soil texture class containing more than 80 per cent silt and less than 12 per cent clay.

siltstone
A very fine-grained consolidated clastic rock composed predominantly of particles of silt.

Silurian
The geological period between 436 and 415 million years ago.

sinkhole
A depression occurring in karst topography, often the result of the collapse of a cavern roof.

slate
A fine-grained metamorphic rock easily split into flat, smooth plates.

slope water
A band of water consisting of Gulf Stream water diluted by approximately 20 per cent coastal water near the edge of the continental shelf and separated from the coastal water by a sharp front.

slumping
The formation of a landslide that develops where strong, resistant rocks overlie weak rocks.

smectite
A greenish variety of clay mineral.

softwood
A forestry term for coniferous, needle-leaved trees and the forests they form.

soil survey
The systematic examination, description, classification, and mapping of soils in an area.

solution lake
A lake formed in soluble material such as salt, limestone, and gypsum; water in these lakes is often alkaline.

Southern Upland
A physiographic area that comprises the southwestern half of mainland Nova Scotia.

spit
A low tongue or narrow embankment of land, usually composed of sand or gravel, formed by wave and current action, with one end attached to the shore and the other ending in open water.

spring tide
A tide that occurs at or near the time of the new or full moon and rises highest and falls lowest from the mean sea level.

staging area
An area where migrating birds congregate to rest and refuel.

staurolite
A crystallized iron-aluminum silicate mineral that occurs in regionally metamorphosed rock.

stibnite
A sulphide compound associated with arsenic and antimony minerals; the principal ore of antimony.

stones
Rock fragments greater than 25 cm in diameter.

storm surge
The rise above normal water level on the open coast that results from wind stress on the water surface.

stratification
1. Applied to rocks: the presence of layers, or strata; typical of sedimentary rock. 2. Applied to water: division of the water column into layers of different temperature or salinity.

stratigraphic
Refers to the formation, composition, sequence, and correlation of stratified rocks as part of the earth's crust.

stratum
A layer of rock (plural *strata*).

striae
Small grooves on the surface of a rock, formed by glacial action.

strike
The compass direction of the line of intersection created by a dipping bed or fault and a horizontal surface.

strike-slip fault
A fault along which movement is horizontal.

subaerial erosion
Erosion that occurs at or near the surface. See *eolian*.

submarine valley or canyon
1. The seaward extension of a valley cut on the continental shelf during low sea level. 2. A steep, valley-like depression carved into the outer margin of the continental shelf and slope by turbidity currents.

submerged coastline
A coast which has been partially drowned as the result of a rise in sea level, a subsidence of the crust, or both.

substrate
The surface on which organisms grow; usually providing physical support and a supply of nutrients.

subtidal
Pertaining to the marine environment below the lowest level of low tide.

succession
The progressive change in the composition of a community of organisms towards a largely stable climax.

superimposed drainage
A natural drainage system established on underlying rocks independently of their structure.

surface water
All moving and standing water naturally open to the atmosphere.

surficial
Characteristic of, pertaining to, formed on, situated at, or occurring on the earth's surface; especially consisting of unconsolidated residual alluvial or glacial deposits lying on bedrock.

surf zone
The area between the outermost breakers and the limit of wave uprush on the seashore.

suspension feeder
A freshwater animal that feeds on materials suspended in water.

syenite
A wholly crystalline rock resembling granite but containing little or no quartz.

sylvite
A potassium-chloride mineral associated with sedimentary salt beds and volcanic features; the principal ore of potassium.

syncline
A fold in layers of rock caused by deformation of the earth's crust. Synclines are basin-shaped and have the younger strata towards the centre of the fold.

taiga
Derived from Russian, meaning *boreal*. In Nova Scotia the term refers to a transition area in the Cape Breton highlands with boreal to tundra-like conditions and supporting windswept dwarf vegetation.

talus
Rock fragments that result from the mechanical weathering of rocks.

tartigrades
A phylum of tiny, highly specialized aquatic invertebrates commonly known as "water bears," mainly less than one millimetre in length and commonly found in water film on the leaves of terrestrial mosses and lichens.

taxa
A group of any size used in the classification of things, particularly plants and animals.

tectonic
Refers to deformation of the earth's crust or to the forces that cause it; controlled by a process such as orogeny.

temperate
1. Refers to species characteristic of mixed forest that have their northern extension in Canada in Cape Breton. 2. The Temperate Forest, composed predominantly of deciduous species, extends west along the St. Lawrence to the Great Lakes and south into the mid-eastern United States.

terminal moraine
See *end moraine.*

terrace
A nearly level surface or bench bordering a steep slope, such as a stream terrace or wave-cut terrace.

terrane
1. A formation or group of formations. 2. The area or surface over which a particular rock or group of rocks is prevalent.

Tertiary
That geological period which elapsed between 65 and 36 million years ago.

texture, soil
The relative proportions of particles less than 2 mm in diameter (sand, silt, and clay) in a soil.

thallus
The vegetative structure of algae and fungi, which may be leaf-like or stem-like, but is not vascular tissue.

thermo-
Description of a condition in seawater, based upon measurement of haline temperature and salinity.

thermodine
A zone of rapidly changing temperatures observed in the vertical profile of a body of water such as a lake.

third-order stream
Tributary initiated by the confluence of two second-order streams.

tholeiites
A general term for basalts textured with isolated crystals in the general mass.

thrust fault
A fault in which the material above the fault plane moves up in relation to the material below; characterized by a low angle of inclination.

tidal amplitude
Vertical tide; the amplitude of the vertical tide (in metres) is half the range between low water and high water.

tidal currents
Horizontal tide; the vertical tide has different amplitudes and phases at different locations and these differences produce slopes in sea surface, giving rise to tidal currents.

tidal flat
A marshy or muddy land area covered and uncovered by the rise and fall of the tide.

tidal gyre
A gyre formed by oscillating tidal currents washing back and forth around the edge of a bank, where the depth is increasing rapidly.

tidal mixing
Occurs when strong tidal currents mix the water column.

tidal rectification
The process of extracting energy from an oscillating tidal current (where the mean velocity is zero) to produce a non-zero mean unidirectional flow.

tide
The periodic rise and fall of water that results from the gravitational attraction of the moon and sun upon the rotating earth.

till
Unstratified glacial and fluvioglacial deposits left after the retreat of glaciers and ice sheets; consists of clay, sand, gravel, and boulders intermingled in any proportion.

tolerant
See *shade-tolerant.*

tombolo
A beach formed in the sheltered lee of an island, often connecting the island to the mainland.

toothed whale
A whale of the sub-order Odontoceti, having teeth rather than plates of baleen. They grasp and swallow prey whole, unlike the sub-order Mysticeti which are filter feeders.

topography
Description of the geographical surface features of a region.

transgression
The gradual expansion of a shallow sea, resulting in the progressive submergence of land, as when sea levels rise or land subsides.

transition zone
An area linking two series of sediments formed in contrasting environments.

transverse fault
A fault whose strike is at a right angle to the general structure.

trellised drainage
See *rectangular drainage.*

Triassic
The geological period between 247 and 212 million years ago.

trilobite
Animal fossil from the class of arthropods Trilobita, now extinct but abundant from the Cambrian to Silurian.

tuff
Rocks consolidated from volcanic material containing a predominance of fragments not greater than 2 cm in diameter.

tungsten
A rare element of the chromium group contained in certain minerals associated with high-temperature quartz veins and isolated as a hard, brittle, white or grey metal.

tunicates
Primitive vertebrates; the adults are sessile and the larvae planktonic; also called sea squirts.

turbidite
A downslope movement of dense, sediment-laden water created when sand and mud on the continental shelf and slope are dislodged and thrown into suspension.

unconformity
A surface of erosion that separates younger strata from older rocks.

understory
The intermediate layer of trees and shrubs within a forest structure.

uplift plain
An eroded and levelled area of land which has been uplifted, thereby forming a raised, generally uniform upland.

upwelling
A vertical movement of water, usually near coasts and driven by onshore winds, that brings nutrients from the depths of the ocean to surface layers.

vascular plants
Seed-bearing plants, ferns and their allies that use vessels to conduct water, salts, and nutrients.

Virginian species
Faunal element of eastern North America found from Cape Cod to Florida living in warm and temperate marine waters. Nova Scotia has a disjunct population.

volcanic bombs
Detached masses of lava shot out by volcanoes, which, as they fall, assume rounded forms like bombshells.

volcanics
One of the main groups of rocks that form the earth's surface.

washover
A small delta formed on the landward side of a barrier beach or bar, resulting from storm waves breaking over low or fragile parts and depositing sediment.

water column
Description of the character of ocean or lake waters based upon a vertical profile that recognizes differences related to depth.

watershed
A planning term that refers to the area from which surface water drains into a common lake or river system or directly into the ocean; also referred to as a *drainage basin.*

water table
The upper level in the saturated zone of groundwater.

wave
1. One of the ridges which alternates with depressions (troughs) on the surface of water and breaks on the shore as surf. 2. More generally applied to ridge and trough oscillation within a fluid (e.g., internal waves in the ocean) and the transmission of light, sound, and electricity through a medium.

wave climate
The nature of incident waves, including the characteristic wave height, period, length, and direction.

wave-cut platform/terrace
A bench or shelf along the coastline at sea level; cut by wave erosion.

wildlife
Any non-domesticated living organism, including plants, lower animals, and vertebrates.

wind gap
A low depression or notch in a ridge where streams formerly flowed; often used for highways.

Wisconsinan glaciation
The last of four glacial stages in the Pleistocene of North America.

xenolith
Fragments of rocks of extraneous origin that have been picked up by magma and are therefore foreign to the igneous rocks in which they occur.

xeric
Refers to habitats in which plant production is limited by availability of water; a dry site.

xerophyte
A plant which grows in a dry habitat and is able to withstand conditions of prolonged drought.

zeolite
A generic term for a group of hydrous aluminosilicate minerals that occurs in cracks and cavities of igneous rocks, especially the more basic lavas.

zonation
The occurrence of species or communities in specific zones, each with a characteristic dominant species; commonly used to define aquatic environments.

zooplankton
Animals that drift or weakly swim in the ocean, largely at the mercy of prevailing currents.