Glossary of terms used in the Coigach Geotrail

Alluvial Fan: fan-shaped deposit formed when a river or flash flood slows down and rapidly dumps its load of sediment. The fans are often banked against hill or mountain slopes.

Amphibolite: a coarse-grained metamorphic rock that is composed mainly of green, brown, or black mineral**s.**

Bed: a layer of sedimentary rock.

Braided river: river with many splitting and joining channels.

Breccia: a rock formed mainly of sharp angular pebbles or boulders that have become bound and cemented together by finer material.

Conglomerate: a coarse-grained sedimentary rock formed mainly of rounded pebbles or boulders that have become bound and cemented together,with finer sand or mud between the pebbles.

Cross-bedding: sedimentary rocks are normally deposited as horizontal layers (or beds), occasionally there will be moving ripples or sand banks where the sand deposits on the front edge of sloping surfaces. These sloping layers are inclined at an angle to the main bedding and show the direction of the current that produced them.

Deformation: where forces acting on rocks change their shape including folding and faulting**.**

Dolerite: a dark coloured medium-grained igneous rock common in dykes and sills (similar to, but coarser than basalt).

Dyke: a sheet of rock that cuts (discordantly) across the grain of a pre-existing rock into which it has been injected; typically formed by the intrusion of an igneous magma, most dykes are vertical or near vertical in appearance. Discordant sedimentary dykes are also known but these are quite rare.

Embayment: a recess in a coastline forming a bay.

Erratic: a block of rock that has been transported by the ice within a flowing glacier and then dumped, far from its source, as the glacier retreated. Erratics may have been carried many kilometres. In this way a boulder of one age may be found resting on rocks of a different type and a different age.

Fault: a fracture in the Earth's crust either side of which the rocks have been displaced.

Granite: a pale-coloured but coarsely crystalline igneous rock containing quartz, feldspar and mica, commonly formed within large deep-seated igneous intrusions and commonly occurring within mountain belts.

Igneous rock: formed by the cooling and crystallisation of a hot liquid magma. Magma may be injected into the Earth's crust as an igneous intrusion. They can also be ejected on to the Earth's surface as lave from a volcano. Examples include granite, syenite, gabbro, rhyolite, dolerite and basalt.

Intrusion: the forcing of molten rock into fissures or between strata of an earlier rock formation.

Magma: molten rock formed beneath the Earth's surface as a result of the melting of parts the Earth's crust or upper mantle.

Mantle: layer of hot, dense rock deep beneath the Earth's surface crust (from about 25 to 2500 km depth). In parts, hot enough to flow slowly (or 'creep') whilst remaining solid.

Metamorphic rock: rocks that have had their original texture and mineralogy changed by processes which usually involve heat and/or pressure (but little if any chemical change) in the Earth's crust. Examples include slate, schist, gneiss, hornfels, marble and mylonite.

Orogeny: the process of mountain formation arising from the collision between continents, typically accompanied by deformation (folding and faulting), metamorphism and the injection of igneous intrusions deep within the Earth's crust.

Palaeomagnetism: is the study of the record of the Earth's magnetic field either in rocks, sediments, or archaeological materials. Certain minerals in rocks lock-in a record of the direction and intensity of the magnetic field when they form.

Phosphatic: containing phosphates.

Quartzite: a very hard, usually almost white, sandstone made up of quartz grains cemented together by quartz crystals (silicon dioxide SiO_2).

Sedimentary rock: rocks that originally formed as layers (or beds) of soft sediment on the Earth's surface; the original sediments being derived from older pre-existing rocks by processes of denudation (weathering, erosion and transport etc). Many have a well-developed granular texture and well-rounded sediment grains. Sedimentary rocks often contain fossils and sedimentary structures (ripples marks etc). Examples include sandstone, mudstone, conglomerate, breccia, limestone, coal, gypsum, chert and ironstone.

Shale: mudstone that has been compressed to form a fine-grained fissile sedimentary rock containing clay minerals. Some dark-coloured shales contain high concentrations of organic matter.

Sill: a sheet of igneous rock that cuts (concordantly) through, but parallel to the grain of, a pre-existing rock into which it has been intruded.

Till: mixture of clay, pebbles and boulders deposited by ice sheets. (Also called boulder clay)

Unconformity: a boundary where a younger set of sedimentary rock layers cuts across an older set, representing a "gap" in geological time when rocks were tilted and then worn away before a younger set were deposited on top.