

## Greek and Latin Words and Prefixes

*I used to sit in class and listen to the terms come floating down the room like paper airplanes. Geology was called a descriptive science, and with its pitted outwashed plains and drowned rivers, its hanging tributaries and starved coastlines, it was nothing if not descriptive.*

- - John McPhee from *Basin and Range*

Geology is a descriptive science, and mastering the language of this science is essential to comprehending geology and mineralogy. These terms are valuable to mineralogists trying to standardize the way we communicate the shape, appearance, color, and other physical and chemical properties. Whereas medicine and other life sciences primarily use Latin prefixes, roots, and suffixes, most, but not all terms in geology and mineralogy are Greek. On the first day of my introductory mineralogy class, Dr. Bob Power provided a list of Greek and Latin words and roots, their meanings, and examples of how each were used in our chosen field of study. I was determined to learn this new language, so I took Dr. Power's document and studied it, memorized much of it, and referred to it frequently. It was my Rosetta Stone for geology. To ensure its preservation I eventually I retyped the list and began curating it; making corrections and adding more examples as well as additional terms I discovered in other readings in my career. I also augmented the list using two extraordinary books: Mitchell and Henley's 1979 book on mineral names and Jeffrey de Fourestier's astonishingly comprehensive *Glossary of Mineral Synonyms*.

This document is divided into two sections: one with Greek terms and the other with Latin. I have shared this document with many students over the years and am now making it more widely available. I hope you will find this as useful as I have. I also welcome additions and corrections to the list.

### References:

- Bates, R.L., and Jackson, J.A., 1987, *Glossary of geology*: Alexandria, Va, American Geological Institute, 788 p.
- Blackburn, W.H., Dennen, W.H., and Russell, P.I., 1997, *Encyclopedia of mineral names*: Ottawa, Mineralogical Association of Canada.
- De Fourestier, J., 1999, *Glossary of Mineral Synonyms*: Ottawa, Ontario, Mineralogical Assoc. of Canada, The Canadian Mineralogist Special Publication 2, 434 pp.
- McPhee, J.A., 1981, *Basin and Range*: New York, Farrar, Straus and Giroux, 216 pp. (This book was included in McPhee's compilation of five geology books, titled *Annals of a Former World*, published in 1999, which won a Pulitzer Prize for General Nonfiction).
- Mindat.org (This website includes name etymology for minerals.)
- Mitchell, R.S., and Henley, J.R., 1979, *Mineral names: what do they mean?* New York, Van Nostrand Reinhold Co, 229 pp.

Julian C. Gray  
Focal Point Mineralogy  
Hillsboro, Oregon, USA  
juliangrocks@gmail.com

## Section 1: Greek words and roots:

Greek word or root	Definition	Example
A, an	Not, without	Amorphous, Aphanitic
Abyssos	Bottomless	Abyssal, Hypabyssal
Achates	A river in Silicy	Agate
Adinos	Close, dense	Adinole
Aeolus	God of winds	Aeolian
Aer	Air	Aerolite
Akme	A point	Acmite
Aktis	A ray or spoke	Actinolite, stalactite
Allo, allothi	Elsewhere, otherwise	Allotropy, allogenic, allochthonous
Allotrios	Alien, foreign	Allotriomorphic
Alumino, alumo	Aluminium, Al	Aluminocopiapite
Ammonio	Ammonium, $\text{NH}_4^+$	Ammoniojarosite
Amphi	About, around	Amphigene
Amphibolos	Doubtful	Amphibole
Amygdale	An almond	Amygdaloidal
Ana	Towards, up to	Anamesite, anamorphism, anatexis
Analkis	Weak	Analcite
Anchi	Near at hand	Anchi-eutectic
Anthrax	Carbon	Anthraxolite
Anti	Opposite	Anticline
Apatao	To deceive	Apatite
Aphros	Foam	Aphrolth
Apo	(derived) from	Apo-rhyolite, apophyllite
Apophyas	An offshoot	Apophyses
Arche	First cause, origin	Archean
Argento	Silver, Ag	Argentopyrite
Arseno	Arsenic, As	Arsenopyrite
Auge	Sheen	Augite
Aura	Exhalation	Aureole
Auri, Auro	Gold, Au	Auricupride
Auto, auth	Self	Autoclastic, autolith, automorphic, authigenesis
Axine	A wedge	Axinite
Axon	An axle	Axiolite
Barus	Heavy	Barites
Baryto	Barium, Ba, for heavy	Baryte
Basanos	A test means of trial (touchstone)	Basanite
Bathos	Depth	Batholith
Belone	An arrowhead	Belonite
Bismuto	Bismuth, Bi	Bismuth
Blastos	A bud, sprout	Crystalloblastic
Botrus	A bunch of grapes	Botryoidal
Byssos	Depth	Bysmalith
Calcio	Calcium, Ca	Calcite
Carbo	Carbonate, $\text{CO}_3^{2-}$	Carboborite
Chadein	To hold	Chadacryst

Chalcos	Copper, Cu	Chalcopyrite
Chi, X	A Greek letter (chi)	Chiastolith
Chloro, Chloros	Green	Chlorite
Chthon	Earth	Autochthonous, allochthonous
Clino	Slope or incline	Clinoclase, monoclinic, triclinic
Cryos	Icy	Cryolite
Crypto	Concealed	Cryptocrystalline
Chrysos	Gold or yellow	Chrysotile, chrysolite
Dactylos	A finger	Dactylitic, dactylotype
Dendron	A tree	Dendritic
Derma	Skin	Dermolith
Deutros	Second	Deutric
Dia	Through	Diablastic, diagenesis, diaschistic, diatrema, diopside
Diabasis	A crossing over	diabase
Diallage	An interchange	diallage
Diorizo	To delimit	Diorite
Dis, di	Twice, double	Disthene, dimorphism
Doleros	Deceptive	Dolerite
Drus	An old tree (e.g., with fungus lined pocket)	Drusy
Eo, ex, exo	Out, from	Exogenic, exomorphic
Eidos	Form	Amygdaloidal, granitoid
Ekloge	A choice selection (of colors of minerals)	Eclogite
Elaion	Oil	Aleoite
En	In	Enclave
Endon	Within	Endogenic, endometamorphic
Enstates	An adversary (to light)	Enstatite
Epi	Upon, near, beside	Epiclastic, epidiorite, epigenetic
Eu	Well, good	Euhedral, euphotide, eutaxitic, eutectic
Eukritos	Easily discerned	Eucrite
Euroeo	To flow well	Eurite
Euxenos	Hospitable (rich in elements)	Euxenite
Ferri	Iron (oxidized form), ferric iron, Fe <sup>3+</sup>	Ferrihydrite
Ferro	Iron (reduced form), ferrous iron, Fe <sup>2+</sup>	Ferrosilite
Fluo, Fluoro	Fluorine, F	Fluorescent, Fluorite
Ge	The earth	Geology
Genos	A race, a kind	Homogeneous
Genesis	Origin	Diagenesis
Gennao	To beget	Authigenous
Glaucos	Bluish-green	Glaucinite, glaucophane
Graphos	I write	Graphite, granophane
Hema, Haima	Blood red	Hematite
Hale	Salt	Halite
Haploos	Simple	Haplite, aplite
Hemi	Half	Hemimorphic, hemimorphite

Heterous	Different	Heterogeneous, heteromorphic
Hexa	Six	Hexagonal
Holos	Complete	Holocrystalline
Homos	The same	Homogeneous
Hyalo	Glass	Hyalophane
Hydro	Water	Hydrothermal
Hyp, hypo	Under, nearly, less, less than	Hypabussal, hypidiomorphic, hypogene
Hyper	Above	Hyperite, hypersthene
Hyseros	Later	Hystero-crystalline
Idios	One's own	Idiomorphic
Iso	Equal	Isometric
Ites (adjectival form of Lithos)	Rock or stone	Calcite, dolomite, granite.
Kalium, Kalios	Potassium, K	Kalsilite
Kata	Down from, down towards	Cataclastic, katagneiss, katamorphism
Kelyphos	A rind, shell	Kelyphitic
Keras	A horn	Keratophyre
Keros	Wax	Ozokerite
Klastos	Broken	Clastic
Klino	I incline	Microcline, syncline
Koccos	A berry	Coccolith
Kolla	Glue	Colloid
Kopros	Dung	Coprolite
Krasis	A mixture	Polycrase
Krateo	I dominate	Melanocratic, leucocratic
Kroke	A thread	Crocidolite
Kryptos	Hidden	Cryptocrystalline
Krystallos	Ice	Crystal
Kyanos	Blue	Kyanite
Laccos	A cistern	Laccolith
Lampros	Bright	Lamprophyre
Lepido	Scale or flake	Lepidolite
Leuco	White, light color, or lacking color	Leucite, Leucocratic
Lithos	A rock	Lithology; -ite (suffix in rock and mineral names); -ith (suffix in terms such as batholith, laccolith, denoting mode of occurrence)
Logos	A discourse	Petrology
Lopas	A basin	Lopolith
Lusis	A loosening	Pneumatolysis
Lyteos	Fusible	Tachylite
Macros	Large, long	Macroscopic
Margarites	A pearl	Margarite
Megas	Big	Megascopic
Meion	Less	Meionite, Miocene
Melano, Melos	Black, or dark color	Melanite, melanocratic, melaphyre
Meros	A part	Merocrystalline

Mesos	Middle	Mesozoic, Anamesite, mesocratic, mesolite, mesostasis
Meta	After, signifying change	Metamorphism
Micros	Small	Microcrystalline, microscopic
Magma	A mixture	Migmatite
Molybdo	Molybdenum, Mo (note, the element molybdenum is the Greek word for Lead, which it resembles and this may lead to confusion)	Molybdenite
Monos	Single	Monoclinic
Morphe	Shape	Amorphous, allotriomorphic, metamorphic, idiomorphic
Mylon	A mill	Mylonite
Myrmeke	An ant	Myrmekite
Natro	Sodium, Na	Natrolite
Nema	A fiber	Nematoblastic
Nephele	A cloud	Nepheline
Oilos	A house	Oikocryst
Oligos	Small, few	Oligoclase, Oligocene
Oon	An egg	Oolite
Ophis	A serpent	Ophicalcite, ophite
Opsomal	To see	Diopside
Orthos	Straight, rectangular, regular, right (angle)	Orthorhombic, orthoclase, orthogenesis
Otelle	A scar	Chrysotile
Oxos	Sour, acid	Oxide
Ozein	To smell	Ozokerite, ozone
Palalos	Old	Paleocene
Palin	All	Palingenesis
Pan	All	Pan-idiomorphic, Pangaea
Para	Beside, nearby, beyond, along with	Paragenesis, paragneiss, paramorphic
Pegma	A framework	Pegmatite
Pelos	Clay	Pelitic
Peri	Around	Pericline
Perknos	Dark	Perknite
Petra	A rock	Petrology
Phacos	A lentil	Phacolith
Phalno	I show	Aphanitic, phenocryst, glaucophane
Phaneros	Distinct	Phaneritic, phenerocrystalline
Phlogopos	Firey looking	Phlogopite
Phone	Sound	Phonolite
Phos	Light	Phosphorescent, euphotide
Phospho	Phosphorous, P	Phosphophyllite
Phyllon	A leaf	Phyllite, apophyllite, phyllosilicate
Phreatos	Of a reservoir	Phreatic
Phyo	To produce	Apophysis
Physa	A stream, jet	Lithophyses

Picros	Bitter	Picrite
Piezo	To press together	Piezocrystallization
Pilos	A felt	Pilotaxitic, hyalopilitic
Pisos	A pea	Pisolite
Plagios	Slanting, oblique	Plagioclase
Plasma	A muolded image	Glomeroplastic
Plektos	Plaited	Symplektite
Plesios	Neighbor	Plesiomorphous
Pleios	Full, many	Pleochroism
Plumbo	Lead, Pb	Plumbojarosite
Pluto	The God of the underworld	Plutonic
Pneuma	Vapor	Pneumatolytic
Poikilos	Spotted	Poikilitic
Polus, poly	Many	Polygenetic, polymorphism
Porphyreos	Purple, reddish	Porphyr
Protos	First	Protolith
Propylon	Entrance	Propylite
Psammos	Sand	Psammitic
Psephos	A pebble	Psephitic
Pseudes	False	Pseudomorph, pseudomalachite
Pyr, pyro	Fire	Pyroclastic, pyroxene, pyrolysis
Rhegos	A blanket	Regolith
Rheo	To stream	Rhyolite
Rhodo	Rose	Rhodonite, Rhodochrosite
Sanis	A plank, table	Sanidine
Schistos	Divided	Schist
Ser	Silk	Sericite
Siderous	Iron, Fe	Siderite
Skia	A shadow	Skiadrome
Skopeo	To look at	Megascopic, microscopic
Soma	A body	Metasomatic
Sphallo	To slip	Asphalt
Sphen	A wedge	Sphene
Stasis	Position	Mesostasis
Stalagma	That which drops	Stalagmite
Stalao	To fall in drops	Stalactite
Stannum	Tin, Sn	Stannite
Stauros	A cross	Staurolite
Stear	Fat	Stearite
Sthenos	Strength	Asthenosphere, diathene, hypersthene
Stib, Stibio	Antimony, Sb	Stibiconite
Stilbo	To glisten	Stilbite
Stoa	A colonnade	Chiastolite
Stroma	A layer	Stromalolite
Stylos	A pillar	Stylolite
Symplektos	Interlaced	Symplektitic
Syn	Together	Syngenetic
Synantesis	A meeting together	Synthetic
Tachys	Quickness	Tachylite

Taxis	Arrangement	Ataxite, eutaxite
Tekton	A builder	Tectonic
Tektos	Melted	Tektite
Tephra	Ashes	Tephra, tephrite
Tetra	Four	Tetragonal
Thera	Eagerly sought	Theralite
Thermos	Hot	Thermal, thermodynamic
Trachys	Rough	Thrachyte
Trema	A hole	Diatreme, trematoblastic
Tri	Three	Trigonal
Triches	Hairs	Trichite
Troktes	A nibbler (e.g. trout)	Troctolite
Trope	A turn	Allotropy, isotropic
Tuphos	Smoke, a cloud	Tuff
Xantho	Yellow	Xanthoconite
Xenos	A stranger	Xenoliths, leucoxene, pyroxene
Zeo	I boil	Zeolites
Zirco	Zirconium, Zr	Zircon

## Section 2: Latin words and roots:

Latin word or root	Definition	Example
Ab	From, away	Ablation, abrasion, agglomerate
Acus	A needle	Acicular
Albus	White	Albite
Allu	To wash upon	Alluvial
Arena	Sand	Arenaceous, arenite
Argilla	Clay	Argillaceous
Com, con	Together, with	Conglomerate, comagmatic, composite
Cornubia	Cornwall	Cornubianite
Corona	A crown	Coronite
Cretus	Grown	Calcrete, concrete, concretion
De	Away, from	Dedolomitization, detritus
Denudo	To lay bare	Denudation
Duro	To harden	Indurated
E, ef, ex	Out	Effusive, ejectamenta
Ferrum	Iron	Ferruginous
Fibra	A thread	Fibrolite
Flo	To become	Silicify, vitrify
Flux (Fluor?)	A flux	Fluorite
Fluvius	A river	Fluvialite
Folium	A leaf	Foliate
Fulgur	Lightening	Fulgurite
Fumus	Smoke	Fumarole
Glomare	To gather in a heap	Agglomerate, conglomerate
Granum	A grain	Granite, granular
Ignis	Fire	Igneous
Injicio	To throw in	Injected

Inter	Between	Intercalate, interstitial
Intra	Within	Intraplate
Lacus	A lake	Lacustrine
Lapillus	A little stone	Lapili
Later	A brick	Laterite
Lignum	Wood	Lignite
Litus	Coast	Littoral
Luere	To wash	Alluvial
Mico	To shine	Mica, micaceous
Natus	Born	Cognate
Novacula	A razor	Novaculite
Oliva	An olive	Olivine
Orbiculus	A small orb	Orbicular
Paulo	A little time	Paulopost
Pene	Almost	Penecontemporaneous
Post	After	Posttectonic
Pumex	Froth	Pumice
Refrango	To break back	Refraction
Rode	To gnaw	Erode
Rudus	Rubble	Rudaceous
Se	Apart from	Secretion
Septum	A partition	Septarian
Serpens	A serpent	Serpentine
Serto	Insert	Interstitial
Silex	Flint	Silica, petrosilex
Sub	Under	Subhedral
Tactus	Touching	Tactite
Tellus	Earth	Telluride
Tero	To rub	Detritus
Trudo	To thrust	Intrusion
Ultra	Beyond	Ultrabasic, ultramafic
Variola	Smallpox, pitted	Variolite
Vermis	A worm	Vermiculite
Viscus	Bird lime	Viscosity
Vitrum	Glass	Vitreous