

## STRATIGRAPHIC SEQUENCE OF KERALA

(Sources:  
*Geological Survey of India Miscellaneous Publication no. 30 Part IX – Kerala, Compiled by T.N. Rajan and  
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*And*  
*Geology of Kerala by K.Soman published by Geological Society of India)*

EON/ERA	AGE(M.a.)	NAME OF UNITS	LITHOLOGY/CHARACTER	PLACES OF EXPOSURE
CENOZOIC	QUARTERNARY 1.75 - Recent	PEBBLE BED	River banks	Valapattanam R Taliparamba R
		KADAPURAM	Marine	Coastal area
		PERIYAR	Fluvial	Lowland area
		VIYYAM	Fluvio-Marine	Coastal area
		GURUVAYOOR	Palaeo-Marine	Lowland area
	MIO-PLIOCENE 5.3	LATERITE	Indurated cap, soft in nature with gritstone and variegated clay at base. Contain Quartz veins	Malapuram D. Kannur, Quilon Kasargod D. Thiruvananthapuram
		WARKALLI	Laterite with sandstone masses	Varkala
			Sand and sandy clays	Nadayara
			Alum clays	Nileshwaram
	Lignite bed		Kanhangad	
	MID to LOWER MIOCENE 13-10	QUILON	Detrital laterite	Padappakara Varkala Cherthala
			Laterite	
			Limestone	
			Sandy clay	
			Carbonaceous clay	
Carbonaceous shale				
Sandy clay				

		VAIKOM	Gravel, Sand, Carbonaceous clay, Thin lignite	Vaikom
EON/ERA	AGE(Ma)	NAME OF UNITS	LITHOLOGY/CHARACTER	PLACES OF EXPOSURE
MESOZOIC	61 – 144 CRETACEOUS	Gabbro – Dolerite Dykes	Basic intrusions	Pathanamthitta D. Kannur D Idamalayar Anakudi (TVPM)
PALAEOZOIC	390 – 550 Mid DEVONIAN to CAMBRIAN	Younger Granites	Alkali Granites Granites Granophyre Acid intrusives Intermediate intrusives	Munnar Ambalavayal Ezhimala Kalpetta Chengannur Peralimala Sholayur Kumbala Shearzone emplacemnets
	CAMBRIAN 550	Younger Charnockites	Massive Charnockite Incipient Charnockite Cordierite Charnockite	Trivandrum D. Pathanamthitta D.
	700-600 NEO- PROTEROZOIC	Younger Ultrabasics- Basics	Perinthatta Anarthosite Kartikulam Gabbro Adakkathodu Gabbro Begur Diorite	Kannur D. Kabani valley Bavali Fault Tirunelli

PROTEROZOIC	2100-1600 PALAEO- PROTEROZOIC	Basic Intrusives	Agali-Anakkali Dolerite dyke swarm	Palaghat Gap area
	2500- 2200 PALAEO- PROTEROZOIC	Migmatite- Gneiss-older Granitoid	Quartzo-feldspathic Gneiss Quartz-Mica Gneiss Homblende Gneiss Homblende-Biotite Gneiss Garnet – Biotite Gneiss with - Migmatites	Trivandrum D. Kollam D. Kottayam D. Idukki D. Palaghat D.
ARCHEAN	2500 NEOARCHEAN	VENGAD Group	Quartz – Mica Schist Quartzite Conglomerate	Thalassheri

EON/ERA	AGE(Ma)	NAME OF UNITS	LITHOLOGY/CHARACTER	PLACES OF EXPOSURE
ARCHEAN	2600 NEOARCHEAN	Older Charnockites	Mafic Granulites Pyroxene Granulites Gnessic Charnockites Banded Magnetite Quartzite	~50% crystalline outcrop of Kerala
	2800 NEOARCHEAN	Khondalite Group	Garnet-Biotite-sillimanite- Cordierite Gneiss Garnet- Biotite Gneiss Leptynite Calc granulite Mafic granulites Quartzite	Trivandrum D. Kollam D. Palghat D. Munnar Pathanamthitta Muvattupuzha

	<p>3000</p> <p>MESO- ARCHEAN</p>	<p>PENINSULAR GNESSIC COMPLEX</p>	<p>Foliated granite</p> <p>Biotite Gneiss</p> <p>Homblende Gneiss</p> <p>Pink Granitic Gneiss</p>	<p>Palghat D.</p> <p>Thalassheri</p> <p>Devikulam</p> <p>Udumbanchola</p>
	<p>3100 – 3000</p> <p>MESO- ARCHEAN</p>	<p>Layered Ultrabasic- Basic Complex</p>	<p>Peridotite</p> <p>Pyroxenite</p> <p>Dunite</p> <p>Anorthate</p>	<p>Attapadi</p> <p>Kannur D</p> <p>Punalur</p> <p>Kasargod D.</p>

<p style="text-align: center;">ARCHEAN</p>	<p style="text-align: center;">3200 MESO- ARCHEAN</p>	<p style="text-align: center;">WYNAD COMPLEX- SCHIST</p>	<p style="text-align: center;">Talc-Tremolite schist Quartz-Sericite schist Garnet-Sillimanite Schist Kyanite-Mica Schist Magnetite Quartzite Fuchsite Quartzite Kyanite Quartzite Calc- Granulite Amphibolite</p>	<p style="text-align: center;">Wayanad D. Kannur D. Kasargod D</p>
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