AGE			PHILIPPINE SEA PLATE			GEOLOGIC FORMATIONS OF HIGH ISLANDS ON THE PHILIPPINE SEA PLATE							
						Mariana Islands						Palau	Yap Main Islands
Periods	Epochs	Radiometric years bp (non-linear)	Plate Rotation	Plate Spreading	Volcanic Ridge Evolution	Guam	Rota	Aguijan and Tinian	Saipan	Farallon de Medinilla	Northern Islands	Babelthuap Peleliu and Angaur Koror and Urukthapel	Gagel-Tomil, Yap, Maap and Rumumg
NEOGENE	Holocene					Merizo limestone					Island/submarine volcanism		
		10^6					Mirakatten limestone (Sugawara)						
							Rota limestone						
	Pleistocene							Tanapag limestone	Tanapag limestone				
							Ponia limestone						
						Taragues limestone							
								Aguijan limestone (Tayama)					
		1.6×10^6								Unnamed limestone		Peleliu limestone	Garim limestone
						Mariana limestone	Mariana limestone	Mariana limestone	Mariana limestone				
	Pliocene								Upper terrace gravels				
												Palau limestone	
												Airai clay/lignite	
		5×10^6				Alifan limestone							
										Unnamed limestone			
						Janum limestone							
						Barrigada limestone							
						Talisay shale/lignite							
						Bonya limestone							
									Fina-sisu basalt flows				
													Tomil volcanics
	Miocene					Dandan basaltic andesite flows							
						Bolanos tuffaceous breccia agglomerate flows							
						Geus River limestone (upper)							
						Schroeder volcanics							
													Map melange
												Arakabesan andesite	
								Tagpochau limestone	Tagpochau limestone with sandstone member				
		25×10^6				Maemong limestone							
						Geus River limestone (lower)							
PALEOGENE	Oligocene					Basaltic sill in Alutom formation							
							Ogo andesites					Ngeremlengui dacite Aimeliik andesite tuff	
						Mahlac shale							
		37×10^6				Alutom volcanics and volcaniclastics							
									Matansa limestone				
	Eocene						Sabana andesite						
									Densinyama fm.				
						Basaltic dikes in Facpi formation		Unnamed volcaniclastic fm.					
									Hagman andesites				
						Facpi formation							
		53×10^6							Sankakuyama rhyolite				Unnamed serpentine
	Paleocene	65×10^6											Yap schist/phyllite
	Cretaceous												Unnamed perodotite

>50-38 Ma: 50-deg. Clockwise rotation of the Philippine Sea Plate

24-8 Ma: 35-deg. Clockwise rotation of the Philippine Sea Plate

>60-40 Ma: Opening of West Philippine Basin

30-17 Ma: Spreading of the Parece-Vela Basin

42-32 Ma: Submarine volcanism builds Palau-Kyushu Ridge, now a remnant arc

20-8 Ma: Submarine & subaerial volcanism build the West Mariana Ridge, now a remnant arc

1.5-0 Ma: Island & submarine volcanism build East Mariana Ridge

5-0 Ma: Spreading of the Mariana Trough