

PHANEROZOIC

CENOZOIC

QUATERNARY



Alluvial units

*A<sub>c</sub>* Alluvial incised stream channel  
*A<sub>v</sub>* Alluvial fan



Colluvial units

*C<sub>g</sub>* Colluvium; dominantly quartzofeldspathic materials; found at base of outcrop  
*C<sub>q</sub>* Colluvium; dominantly quartz



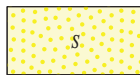
Sheetwash units

*W* Clay, silt, and sand in sheetwash fans  
*W<sub>f</sub>* Sheetwash fan; very gently inclined landform (less than 1 degree slope); extremely low relief  
*W<sub>l</sub>* Sheetwash with lithic fragments



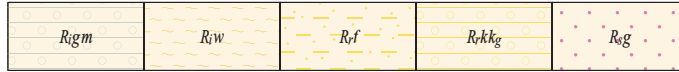
Eolian units

*E<sub>d</sub>* Eolian dunefield  
*E<sub>r</sub>* Eolian sandplain  
*E<sub>t</sub>* Eolian veneer over alluvium and/or colluvium



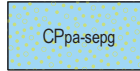
Sandplain unit

*S* Sandplain



Residual or relict units

*R<sub>gm</sub>* Quartzofeldspathic sand, silt, and clay derived from weathered metamorphic rock  
*R<sub>w</sub>* In situ weathered rock  
*R<sub>f</sub>* Ferruginous duricrust, massive to rubbly; includes iron-cemented reworked products  
*R<sub>kk<sub>g</sub></sub>* Groundwater calcrete; locally forms low mounds; nodular to massive; commonly with alternating layers of carbonate and chalcedony  
*R<sub>s</sub>* Quartzofeldspathic sand, commonly over granite



**PATERSON FORMATION:** conglomerate (including diamictite), sandstone, and siltstone; largely glaciogene

PALEOZOIC

CARBONIFEROUS-PERMIAN

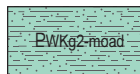
Giles Event (1085–1040 Ma<sup>1,2,3</sup>)

1078–1062 Ma

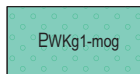


*EWK-g* Granitic rock, undivided  
*EWK-mg* Strongly foliated biotite metamonzogranite; medium-grained; equigranular

1078–1074 Ma

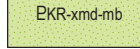
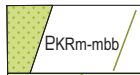


Moderately to strongly foliated amphibolite after fine- to medium-grained gabbro; strongly epidotized and cut by abundant quartz and pegmatite veins; locally mylonitic



Cumulate-textured metagabbro; locally containing clinopyroxene, orthopyroxene, olivine and garnet

c. 1078 Ma

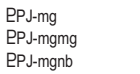
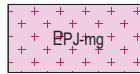


**MUMMAWARRAWARRA BASALT**  
*EKRm-mbb* Massive amygdaloidal plagioclase porphyritic metabasalt; garnet-bearing; locally moderately foliated and amphibolitic

**MACDOUGALL FORMATION**  
*EKRd-mhe* Muscovite(–garnet–kyanite) granofels; metamorphosed arkose  
*EKRd-mhs* Interlayered medium- to coarse-grained quartzite and muscovite(–garnet–kyanite) schist; local quartz-pebble conglomerate  
*EKRd-mt* Metamorphosed arkose and quartzite; undivided  
*EKRd-mte* Psammitic fine- to medium-grained granofels, garnet-bearing, well-recrystallized, local bedding-parallel medium-grained amphibolite  
*EKRd-mtn* Psammitic gneiss; biotite–garnet(–magnetite) quartzofeldspathic gneiss; migmatitic; local layer-parallel amphibolite  
*EKRd-mtq* Medium- to coarse-grained quartzite; locally with muscovite and garnet  
*EKRd-mxym* Mylonitic quartz-pebble metaconglomerate, feldspathic metasandstone, muscovite quartzite, and phyllite; locally garnetiferous near mafic intrusions (section only)  
*EKR-xmd-mb* Unassigned metamorphosed siliciclastic and mafic volcanic rocks

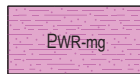
Musgrave Orogeny (1220–1150 Ma<sup>1</sup>)

1219–1148 Ma



*PPJ-mg* Metagranite and gneiss  
*PPJ-mgmg* Strongly foliated to gneissic weakly feldspar porphyritic hornblende–biotite metamonzogranite; garnet-bearing; locally migmatitic and mylonitic  
*PPJ-mgnb* Well-foliated to gneissic biotite–hornblende metamonzogranite; garnet-bearing; locally mylonitic

c. 1600 Ma



Strongly foliated to gneissic biotite(–hornblende) metasyenogranite; garnet-bearing; commonly migmatitic

PROTEROZOIC

MESOPROTEROZOIC

Warakurna Supersuite

Giles Suite

Bentley Supergroup

Kunnamara Group

Warlawuru Supersuite  
Pitjanjatjara Supersuite

CANNING BASIN

WARAKURNA LARGE IGNEOUS PROVINCE

BENTLEY BASIN

MUSGRAVE PROVINCE