

Colluvial units

- C* Unconsolidated to partly consolidated, weakly cemented and compacted proximal mass-wasting deposits in a silt and sand matrix; includes ferruginous deposits
- Cf* Ferruginous rubble and scree, unconsolidated
- Cq* Predominantly quartz-rich silt, sand, and gravel, derived from quartz veins and quartz-rich rock

Sheetwash units

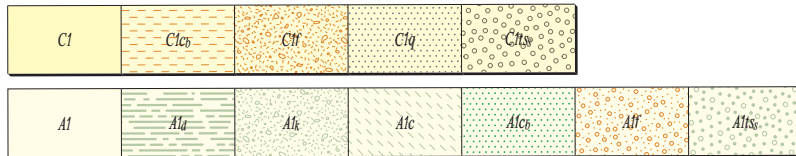
- W* Sandy and clayey distal sheetwash and slope deposits, no clearly defined drainage
- Wg* Quartzofeldspathic sand and silt
- Wq* Predominantly quartz-rich silt, sand, and gravel, derived from quartz veins and quartz-rich rock

Alluvial units

- A* Silt, sand, and gravel in drainage channels and adjacent to floodplains; includes ferruginous deposits
- Ac* Clay-rich alluvium
- Acb* Swelling clay (gilgai)
- Aq* Alluvium with abundant vein-quartz fragments

Lacustrine unit

- L* Unconsolidated, fine-grained deposits in claypans, perennial lakes, and swamps; low-lying areas with internal drainage; usually thickly vegetated



Colluvial units, third generation

- C1* Quartz and rock fragments in an unconsolidated silt and sand matrix; includes ferruginous deposits
- C1cb* Swelling clay (gilgai) and rock fragments, mostly developed over dolerite
- C1f* Unconsolidated ferruginous rubble and scree
- C1q* Quartz fragments in an unconsolidated silt and sand matrix, derived from quartz veins and quartzose rocks
- C1ts* Sandstone fragments in an unconsolidated silt and sand matrix

Alluvial units, third generation

- A1* Unconsolidated silt, sand, and gravel in active drainage channels; includes ferruginous deposits
- A1a* Unconsolidated, mainly fine-grained deposits in drainage depressions
- A1k* Silt, sand, and gravel as stream-bank deposits marginal to active channels, incised by present-day drainage
- A1c* Clayey alluvium developed on alluvial flats
- A1cb* Swelling clay (gilgai) developed on alluvial flats
- A1f* Unconsolidated ferruginous silt, sand, and gravel
- A1ts* Sandstone fragments in an unconsolidated silt and sand matrix

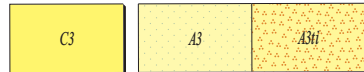


Colluvial unit, second generation

- C2* Quartz and rock fragments in a partly consolidated silt and sand matrix

Alluvial units, second generation

- A2* Partly consolidated silt, sand, and gravel; partly dissected by present-day drainage
- A2cb* Swelling clay (gilgai), commonly developed near dolerite
- A2ts* Sandstone fragments in a weakly cemented and compacted silt and sand matrix

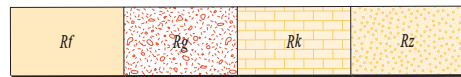


Colluvial unit, first generation

- C3* Quartz and rock fragments in a weakly cemented and compacted silt and sand matrix; deeply dissected valley-fill deposits

Alluvial units, first generation

- A3* Weakly cemented and compacted silt, sand, and gravel; deeply dissected by present-day drainage
- A3ti* Sand and gravel with ferruginous cement; deeply dissected by present-day drainage



Residual or relict units

- Rf* Ferruginous deposits, including lateritic, ferruginous, and manganese duricrust
- Rg* Weathered quartzofeldspathic rock with locally derived sand and sandy clays
- Rk* Calcrete, developed in and adjacent to alluvial channels; locally silicified; dissected by major present-day drainage
- Rz* Silcrete and brecciated siliceous caprock

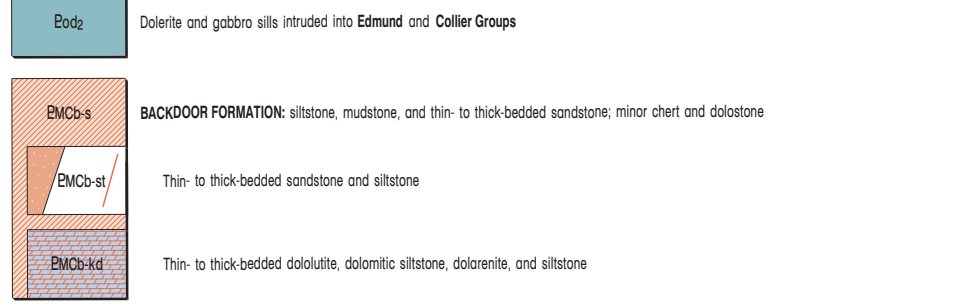


- zq* Quartz veins, of various ages
- zi* Ferruginous veins and linear alteration zones containing hematite-magnetite-chalcedony rock, saussuritized feldspar-quartz-phlogopite-goethite-hematite-chalcedony rock, and quartz-sericite-phlogopite rock with both clay and opaque minerals



- od* Dolerite dykes, sills, and small intrusions, of various ages; one suite dated at c. 755 Ma¹; includes minor quartz diorite, tonalite, and biotite monzogranite; dashed where interpreted from aeromagnetic data

Edmundian Orogeny (1070–755 Ma²)

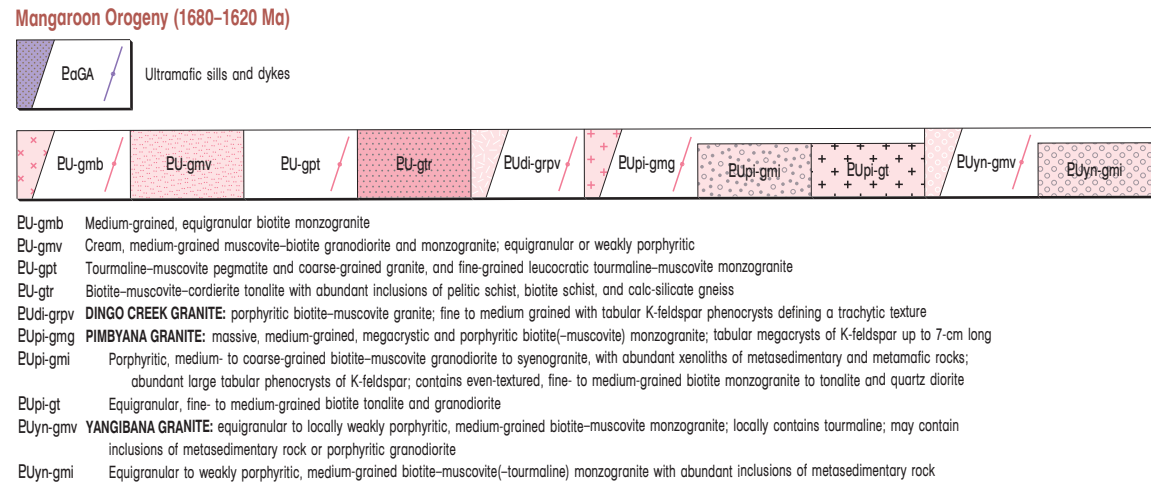


- Eod2* Dolerite and gabbro sills intruded into **Edmund** and **Collier** Groups
- BACKDOOR FORMATION:** siltstone, mudstone, and thin- to thick-bedded sandstone; minor chert and dolostone
- EMCb-s* Thin- to thick-bedded sandstone and siltstone
- EMCb-kd* Thin- to thick-bedded dololite, dolomitic siltstone, dolarenite, and siltstone
- Eod12* Dolerite and gabbro sills intruded into **Edmund** Group; oldest suite (*Eod1*) dated at c. 1465 Ma³⁴ and youngest suite (*Eod2*) dated at c. 1070 Ma³⁴

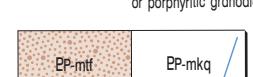


- Bangemall Supergroup**
 - Collier Group**
 - EMCb-s* **BACKDOOR FORMATION:** siltstone, mudstone, and thin- to thick-bedded sandstone; minor chert and dolostone
 - EMCb-st* Thin- to thick-bedded sandstone and siltstone
 - EMCb-kd* Thin- to thick-bedded dololite, dolomitic siltstone, dolarenite, and siltstone
 - Eod12* Dolerite and gabbro sills intruded into **Edmund** Group; oldest suite (*Eod1*) dated at c. 1465 Ma³⁴ and youngest suite (*Eod2*) dated at c. 1070 Ma³⁴
- Edmund Group**
 - EMEc-s* **COODARDOO FORMATION:** thin to very thick bedded lithic quartz sandstone; minor siltstone and mudstone
 - EMEc-st* **Curran Member:** siltstone and fine- to coarse-grained sandstone; locally intruded by dolerite sills; has gradational contacts with underlying **ULLAWARRA FORMATION** and overlying **COODARDOO FORMATION**
 - EMEI-st* Sandstone, conglomerate, siltstone, and dolostone
 - EMEI-s* **ULLAWARRA FORMATION:** siltstone, fine-grained sandstone, dolostone, and chert; intruded by numerous dolerite sills (*Eod12*)
 - EMEv-k* **DEVIL CREEK FORMATION:** laminated dolostone and dolomitic siltstone; local thick-bedded dolerite
 - EMEd-c* **DISCOVERY FORMATION:** massive or laminated chert, silicified mudstone, and siltstone; local silicified sandstone and conglomerate
 - EMEd-sl* Siltstone
 - EMEk-s* **KIANGI CREEK FORMATION:** siltstone, mudstone, and thin to very thick bedded quartz sandstone; minor dolostone and conglomerate
 - EMEk-sl* Siltstone; minor fine-grained sandstone
 - EMEk-kd* Dolostone, siltstone, and sandstone
 - EMEp-k* **CHEYNE SPRINGS FORMATION:** dololite, dolarenite, dolerite, mudstone, siltstone, and minor sandstone
 - EMEb-st* Medium- to thick-bedded sandstone and siltstone; locally sulfidic
 - EMEb-sl* **BLUE BILLY FORMATION:** siltstone and mudstone; minor thin- to thick-bedded sandstone; locally sulfidic
 - EMEG-s* **GOORAGOORA FORMATION:** fine- to coarse-grained sandstone and siltstone; minor conglomerate, dolostone, and dolomitic siltstone
 - EMEI-k* **IRREGULLY FORMATION:** stromatolitic and non-stromatolitic dolostone, dolomitic siltstone, quartz sandstone, and conglomerate
 - EMEI-sl* Siltstone, sandstone, and dolostone
 - EMEI-st* Sandstone, conglomerate, siltstone, and dolostone
 - EMEY-s* **YILGATHERRA FORMATION:** sandstone, siltstone, conglomerate, and dolostone

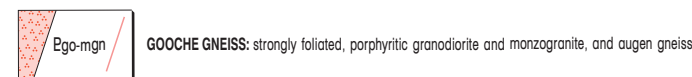
Mangaroo Orogeny (1680–1620 Ma)



- EaGA* Ultramafic sills and dykes
- EU-gmb* Medium-grained, equigranular biotite monzogranite
- EU-gmv* Cream, medium-grained muscovite-biotite granodiorite and monzogranite; equigranular or weakly porphyritic
- EU-gpt* Tourmaline-muscovite pegmatite and coarse-grained granite, and fine-grained leucocratic tourmaline-muscovite monzogranite
- EU-gr* Biotite-muscovite-cordierite tonalite with abundant inclusions of pelitic schist, biotite schist, and calc-silicate gneiss
- EUdi-grpv* **DINGO CREEK GRANITE:** porphyritic biotite-muscovite granite; fine to medium grained with tabular K-feldspar phenocrysts defining a trachytic texture
- EUpi-gmg* **PIMBYANA GRANITE:** massive, medium-grained, megacrystic and porphyritic biotite(-muscovite) monzogranite; tabular megacrysts of K-feldspar up to 7-cm long
- EUpi-gmi* Porphyritic, medium- to coarse-grained biotite-muscovite granodiorite to syenogranite, with abundant xenoliths of metasedimentary and metamorphic rocks; abundant large tabular phenocrysts of K-feldspar; contains even-textured, fine- to medium-grained biotite monzogranite to tonalite and quartz diorite
- EUpi-gt* Equigranular, fine- to medium-grained biotite tonalite and granodiorite
- EUyn-gmv* **YANGIBANA GRANITE:** equigranular to locally weakly porphyritic, medium-grained biotite-muscovite monzogranite; locally contains tourmaline; may contain inclusions of metasedimentary rock or porphyritic granodiorite
- EUyn-gmi* Equigranular to weakly porphyritic, medium-grained biotite-muscovite(-tourmaline) monzogranite with abundant inclusions of metasedimentary rock or porphyritic granodiorite



- EP-mtf* Metamorphosed feldspathic sandstone and psammite schist; includes interbedded pelite, quartzite, and metamorphosed granule conglomerate
- EP-mkq* Calc-silicate gneiss and schist



- Ego-mgn* **GOOCHE GNEISS:** strongly foliated, porphyritic granodiorite and monzogranite, and augen gneiss