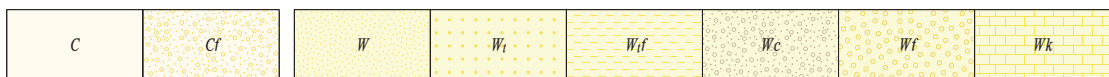


PHANEROZOIC

CENOZOIC

QUATERNARY



**Colluvial units**

- C* Quartz and rock fragments in a silt and sand matrix; includes ferruginous deposits
- Cf* Ferruginous rubble and scree

**Sheetwash units**

- W* Sandy and clayey distal sheetwash and slope deposits; no clearly defined drainage
- Wt* Silt and sand; surface characterized by shallow depressions aligned perpendicular to slope; supports banded mosaic vegetation ('tiger bush')
- Wtf* Ferruginous silt and sand; surface characterized by shallow depressions aligned perpendicular to slope; supports banded mosaic vegetation ('tiger bush')
- Wc* Clay, silt, and sand from saprolite and saprock
- Wf* Low-gradient deposits of ferruginous sand, silt, and gravel
- Wk* Distal sheetwash with calcrete cutans and carbonate cement



**Alluvial units**

- A* Clay, silt, sand, and gravel in channels and on floodplains
- Ad* Unconsolidated, fine-grained deposits in alluvial drainage depressions, claypans, ephemeral lakes, and swamps; low-lying areas with internal drainage; typically thickly vegetated
- Ar* Unconsolidated, fine-grained deposits on floodplains
- Af* Ferruginous clay, silt, sand, and gravel in channels and on floodplains
- Aft* Unconsolidated, fine-grained ferruginous deposits on floodplains
- Ak* Calcrete developed in and adjacent to alluvial channels

**Lacustrine unit**

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

**Sandplain unit**

- S* Quartz sand of mixed origin; includes residual and eolian sands

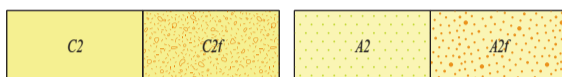


**Colluvial units, second generation**

- Ct* Quartz and rock fragments in an unconsolidated silt and sand matrix; includes ferruginous deposits
- Ctc* Clay, quartz sand, and deeply weathered rock fragments; reworked saprolite and saprock
- Ctf* Unconsolidated ferruginous rubble and scree
- Ctq* Unconsolidated quartz fragments in a silt and sand matrix; derived from quartz veins and quartzose rocks

**Alluvial units, second generation**

- At* Unconsolidated silt, sand, and gravel in active drainage channels and floodplains; includes ferruginous deposits
- Aft* Unconsolidated ferruginous silt, sand, and gravel



**Colluvial units, first generation**

- C2* Quartz and rock fragments in a partly consolidated silt and sand matrix
- C2f* Partly consolidated ferruginous rubble and scree

**Alluvial units, first generation**

- A2* Partly consolidated silt, sand, and gravel; partly dissected by present-day drainage
- A2f* Partly consolidated ferruginous silt, sand, and gravel; partly dissected by present-day drainage



**Residual or relict units**

- Rif* In situ weathered rock; ferruginous
- Rf* Ferruginous deposits, including lateritic, ferruginous, and manganiferous duricrust
- Rk* Calcrete, developed in and adjacent to alluvial channels; carbonate and vuggy opaline silica; dissected by major present-day drainage
- Rl* Saprolite and saprock of uncertain protolith
- Rz* Silcrete and brecciated siliceous caprock

**Mulka Tectonic Event (c. 570 Ma)**



**Edmundian Orogeny (1030–955 Ma<sup>1</sup>)**

c. 1070 Ma

Warakurna Supersuite

**EWKku-od** KULKATHARRA DOLERITE: dolerite and gabbro sills intruded into Edmund Group and Collier Group



**Mutherbukin Tectonic Event (1385–1200 Ma)**

c. 1460 Ma

Edmund Group

**EME-sl** ULLAWARRA FORMATION: siltstone; subordinate fine-grained sandstone, dolostone, and chert; intruded by numerous dolerite sills

**EME-sli** Ferruginous siltstone; minor fine- to medium-grained sandstone and chert; commonly manganiferous

**Mangaroon Orogeny (1680–1620 Ma<sup>2</sup>)**

**Capricorn Orogeny (1820–1770 Ma<sup>3</sup>)**

<1983 Ma

Padbury Group

**EPAI-ssq** LABOUCHERE FORMATION: quartz wacke and siltstone with local quartz-pebble conglomerate beds; includes quartz schist, quartz–muscovite schist, and minor biotite–muscovite schist, locally with chloritoid, staurolite, and/or andalusite

**EPAI-saq** Quartz arenite; minor interleaved quartz wacke and siltstone; metamorphosed

**Glenburgh Orogeny (2005–1950 Ma<sup>4</sup>)**

<2014 Ma

Bryah Group

**EBYh-sf** HORSESHOE FORMATION: ferruginous, chloritic shale, and quartz–feldspar wacke; partly manganiferous and calcareous; includes iron formation and chert

**EBYh-cl** Iron formation, quartz–magnetite–(stilpnomelane); white chert lenses

**EBYr-ss** RAVELSTONE FORMATION: lithic wacke and siltstone; chloritic fragments; graded beds

**EBYr-st** Lithic quartz–feldspar sandstone; interbedded minor siltstone; thinly bedded; chloritic matrix

**EBYn-bb** NARRACOOTA FORMATION: basalt, locally pillowed and plagioclase–phyric, and mafic–ultramafic schist; interbedded with volcanoclastic and sedimentary rocks; metamorphosed

**EBYn-fn** Sericitic felsic volcanic rock; locally porphyritic with equant quartz phenocrysts; weakly to strongly foliated

**EBYn-od** Dolerite sills and dykes

WARAKURNA LARGE IGNEOUS PROVINCE

COLLIER BASIN

EDMUND BASIN

PADBURY BASIN

BRYAH BASIN

PALEOPROTEROZOIC–MESOPROTEROZOIC

PROTEROZOIC

PALEOPROTEROZOIC